

CA JOURNAL

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Airlines of United States Have Best Year in History

The year 1949 was the biggest the airlines of the United States have ever had, D. W. Rentzel, Administrator of Civil Aeronautics, said recently.

With better air navigation and landing aids, promoting greater safety and more schedule regularity, the airlines attracted an estimated 16,500,000 passengers during the year, and flew a total of about 460,000,000 miles.

Their planes completed more trips due to the increasing use of the CAA's instrument landing system at 87 sites in the United States and they invaded successfully a new patronage field by instituting coach service between major cities at reduced fares. In every department except express on domestic lines, the year's figures show important gains over 1948.

The combined safety rate of United States domestic and international airlines is 1.0 passenger fatalities per 100,000,000 passenger miles flown, the lowest in history. On international routes, there were no passenger fatalities. Although 93 passengers were killed in four domestic accidents, compared with 83 in 5 accidents during 1948, the rate in terms of passenger miles flown equalled that year's 1.3, close to the all-time low of 1.2.

Other civil aviation activities, however, showed decreases in their 1949 totals. Manufacturer of personal planes was down an estimated 52 percent with 3,525 units made in 1949 as against 7,302 during 1948. The total number of United States civil aircraft registered dropped from 95,997 in 1948 to 92,700, due partly to the fact that the CAA audited its records to eliminate planes that have been put out of use.

Certificated Pilots Increased.—An estimated 510,000 certificated pilots were recorded at year's end, as against 491,306 during 1948. However, the number of new pilots, as reflected in the student pilot certificates issued and new private pilot licenses granted, showed serious reductions. Only 45,000 student permits were issued in 1949 as compared with 117,725 in 1948, and the private pilot certificate issuances were 30,000 as against 86,838. Commercial pilot and airline transport pilot certificates issued dropped also, 8,151 to 7,300, and 1,100 to 1,000.

The first count of the number of women pilots in 4 years showed an increase from 5,122 in 1945 to 9,678 in 1949, a growth of 89 percent. The inventory also showed 1,811 women rated as air traffic control operators and 400 as parachute technicians, about 20 percent of the total ratings in these specialties.

The number of airports in operation held about even, with an estimated 6,100 at year's end against

6,016 at the end of 1948, although an estimated 475 airports were closed during the year.

Whereas emphasis by the scheduled airlines in 1948 was on air freight, throughout 1949 it was on more passengers. Irregular carriers had proved that lower fares and less emphasis on the usual air travel luxuries attract many travelers, and one by one the major airlines entered the coach field. The increased number of passengers carried is attributable largely to this new service, with one airline registering a 30-percent increase in passengers, of which 25 percent were coach passengers. Other efforts to attain passenger volume included "family plan" tickets by which members of a traveler's family were carried for half fare on certain days, special vacation fares, and special round-trip rates.

The airlines received more mail pay during 1949, but the important change in their situation was their

(Continued on page 5)

Business Flying Gained in Year, CAA Study Shows

Private and nonscheduled commercial aircraft in the continental United States were flown 15,130,000 hours during 1948, a decline of 7 percent from the 16,334,000 hours flown in 1947, according to preliminary findings based on a sample survey conducted by the Aviation Statistics Division of the Civil Aeronautics Administration.

The survey was conducted to determine the amount and type of flying performed during 1948 by civil aircraft, exclusive of planes operated by the scheduled airlines and the CAA. Final and complete figures will appear in the CAA's annual publication, Aircraft Use in 1948.

The survey indicates that an average of 169 hours per aircraft was flown in all types of flying during 1948, compared with 189 hours in 1947, a decrease of 11 percent.

Significant Changes Noted.—Several significant changes were noted in the 1948 pattern of flying as compared with previous years. Instructional flying declined sharply and business flying increased substantially.

(Continued on page 12)

"Airman's Guide" Adds Two New Aids to Airmen

Two new aids to airmen—listing of airports where weather information is available, and a list of the frequencies guarded by CAA communications stations and towers—have been added to the biweekly Airman's Guide, D. W. Rentzel, Administrator of Civil Aeronautics, has announced.

In addition, the Flight Information Manual, which complements the Guide, hereafter will include a tabulation of danger areas. The changes and additions have been made on the basis of a recent survey of subscribers to the Guide.

Information on danger areas will include their location, the times when they are activated, which ones may be flown over above certain minimum altitudes, and to whom requests for permission to fly over or land should be directed.

Mr. Rentzel pointed out that the Airman's Guide,

besides being an in-flight and preflight reference publication, enables the cross-country flier to bring his aeronautical charts, issued every 6 months, up to date.

This is true, the Administrator stated, because the Airman's Guide lists in every 2-week issue an average of 20 airport abandonments, 23 new airports, and 450 changes in airport servicing, lighting, and other facilities.

To increase the factor of safety in cross-country flight the Administrator, therefore, repeatedly has requested all fliers to study the Guide before take-off. It is posted on all airport bulletin boards. Individual fliers desiring personal copies may obtain them from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The subscription price, covering 26 issues of the Guide and two issues of the Flight Information Manual, is \$6 a year.

TWA and American Permitted to Try Transcontinental Coach Flight Plan

The Civil Aeronautics Board last month announced that it would not prevent the transcontinental coach tariffs of American Airlines and Transcontinental & Western Air from becoming effective, provided the carriers file certain minor technical changes to the tariff.

American and TWA each proposed the operation of one daily round trip transcontinental air coach schedule between New York, Chicago, and Los Angeles. Service was to begin on December 27 by TWA with DC-4 equipment having 60 seats, and by American with 70-seat DC-4 equipment. Under its tariff, American will replace its DC-4s with DC-6s, also having 70 seats, in April. The transcontinental fare for both carriers and both types of equipment is \$110, plus Federal tax. The tariffs will remain in effect until December 31, 1950. No departure or arrival times are specified and certain normal passenger services, including meals, will be eliminated.

Departure from Previous Policy.—The Board pointed out that permitting these tariffs to go into effect constituted a departure from its September 7 policy statement on air-coach service in two respects. In the first instance no limitations on departure and arrival times were imposed. The Board indicated that it had required such limits in order to confine coach operations to the off-peak periods of the day. In transcontinental service, however, there appeared to be no well-defined peaks, both daytime and late evening departures being provided in the present schedules of the carriers. The reason for not imposing time limitations on American and TWA for their transcontinental coach operations was due to the absence of a well-defined peak and, accordingly, to the Board's desire to enable the carriers to schedule the coach flights in such a way as to minimize diversion of traffic from their regular services. The lack of restriction on departure time, therefore, does not represent a change in the Board's belief in the desirability of scheduling coach service during off-peak periods.

The Board also stated that it was extending its previous deadline of June 30, 1950, to December 31, 1950, for transcontinental coach tariffs in order to give American a reasonable period within which to obtain experience with the DC-6 aircraft in coach service. The Board indicated that it would establish December 31, 1950, as the deadline for other coach operations, if and when proposed, which are wholly or in part competitive with American's or TWA's transcontinental coach operations, but would retain the June 30 deadline for all other coach tariffs.

Gross Revenue Is Factor.—The Board pointed out that American's coach tariff for the DC-6 was the first it had permitted to become effective calling for the use of high-speed post-war equipment. The Board was influenced by the fact that the DC-6 coach was to contain a sufficient number of seats so that the gross revenue from coach flights would approximate the gross revenue from regular flights at comparable load factors. The Board indicated that it had carefully considered the probable effect of the use of such equipment both on American and on other transcontinental carriers—certificated and noncertificated. While recognizing that there was danger that a DC-6 coach operation might cause more diversion of traffic from first-class service than the use of DC-4s, there nevertheless appeared to be operating and cost advantages, and potential service improvements for the traveling public, in the use of DC-6s over DC-4s. The Board believed that the promise of these advantages more than outweighed the threat of diversion during the 7-month experimental period. If at the conclusion of the experimental period it appeared that the use of DC-6s in coach operations created excessive diversion, or if the advantages proved illusory, the

Board said it would require that the use of the DC-6 in coach service be discontinued.

The Board also indicated that it was extending until March 1 the tariff of TWA providing for DC-3 coach operations between Kansas City and Los Angeles. The purpose of this extension of time is to give TWA an opportunity to replace its DC-3s in this service with larger, higher-density equipment. Previously the Board had indicated that it would not permit TWA to continue this service with DC-3s beyond December 31, 1949.

October Engine Shipments Near September Figure

The civil aircraft engine industry's shipments for October 1949 were valued at \$3,456,000—almost identical with the September total but 32 percent higher than a year ago, according to a report issued jointly by the Civil Aeronautics Administration and the Bureau of the Census. Dollar value was distributed as follows: \$1,051,000 for complete engines, \$1,976,000 for spare parts, and \$429,000 for other products and services.

October shipments included 174 engines representing 78,400 horsepower compared with 219 engines and 64,300 horsepower during October 1948.

The detailed information on October civil aircraft engine shipments shows:

Civil Aircraft Engine Shipments, October 1949

	1949		1948
	October	September	October
Number (Total).....	174	200	219
Horsepower output (thousand hp.).....	78.4	85.6	64.3
Value (thousand dollars).....	3,456	3,473	2,619
Complete engines.....	1,051	1,170	787
Parts.....	1,976	1,927	1,721
Other Products.....	429	376	111

The number of civil aircraft engines shipped in the first 10 months of 1949 was 58 percent less than shipments for the same period of 1948. The monthly figures on number of engines and horsepower for the first 10 months of 1948 and 1949 appear below:

Civil Aircraft Engine Shipments, January-October

Month	1949		1948	
	Number	Horsepower	Number	Horsepower
January.....	264	111,900	779	270,700
February.....	469	142,300	1,007	316,300
March.....	504	123,800	1,089	285,900
April.....	602	119,100	973	300,200
May.....	477	121,000	1,286	305,000
June.....	364	95,900	1,457	620,000
July.....	286	86,100	636	126,600
August.....	282	61,900	660	139,500
September.....	200	85,600	428	156,200
October.....	174	78,400	219	64,300
Total.....	3,622	1,026,000	8,534	2,584,700

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DEPARTMENT OF COMMERCE

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Civil Aeronautics Administration

D. W. Rentzel, Administrator

Ben Stern, Director

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CAA and CAB Releases

Copies of CAA releases may be obtained from the CAA Office of Aviation Information. CAB releases are obtainable from the Public Information Section of the Board. Both offices are located in the Department of Commerce Building, Washington 25, D. C.

Administration

Flying by Businessmen and Farmers Up in 1948 as Other Non-Scheduled Activities Drop, CAA Survey Shows—(November 28).

Two More Aids for Airmen Announced by the CAA—(December 7).

CAA Head Reports Transport Flying Up, Personal Airplane Use Spotty—(December 8).

CAA Appoints Macatee to Study Airports Access Roads—(December 10).

States Active in Enforcing Safe Air Laws, CAA Reports—(December 14).

Air Force to Study CAA Cross-Wind Landing Gear—(December 29).

Address by D. W. Rentzel, Administrator of Civil Aeronautics, entitled "Our Civil Aviation Balance Sheet," given at New Orleans, La., (December 8).

Board

Board Announces Hearing on Meteor Air Transport, Inc. Accident at Detroit, Michigan—(CAB 49-93) Nov. 29, 1949.

Mileage & Traffic Statistics for Sept. 1949—(CAB 49-94) Dec. 1, 1949.

CAB Approves Transcontinental Coach Fares for TWA and American—(CAB 49-95) Dec. 2.

CAB Denies Air Service to Mitchell, S. Dak., by Mid-Continent—(CAB 49-96) Dec. 2.

CAB Denies Mid-Continent an Alternate Route Between Kansas City and New Orleans—(CAB 49-97) Dec. 5.

Public Hearing Set for American Airlines Accident at Dallas, Tex.—(CAB 49-98) Dec. 6.

CAB Announces Transatlantic Air Policy for 1950—(CAB 49-99) Dec. 6, 1949.

CAB Sets Hearing on California Arrow Airlines Accident Near Vallejo, California—(CAB 49-100) Dec. 16.

Public Hearing Set for Capital Airlines Accident at Washington, D. C.—(CAB 49-101) Dec. 16.

Merger of Two Feeder Airlines Approved by Civil Aeronautics Board—(CAB 49-102) Dec. 16.

Supplemental Opinion in California-Nevada Service—(CAB 49-103) Dec. 19, 1949.

CIVIL AERONAUTICS JOURNAL

CAB Invites Air Carriers To Offer Summer Charter Flights To Europe

The Civil Aeronautics Board last month announced that, because of the large amount of air travel expected between the United States and Europe during 1950, it would entertain applications from certificated air carriers, and applications from large irregular air carriers, to engage in group charter operations between the United States and Europe. The Board said it would consider approving this type of operation for the period between June 1, 1950, and September 30, 1950.

In a policy statement on trans-Atlantic air travel for 1950, the Board said:

"The Civil Aeronautics Board has given careful consideration to the movement of air traffic to Europe during 1950. Preliminary forecasts indicate that this traffic will be unusually heavy, partly because of the incidence of Catholic Holy Year, partly because of the devaluation of currencies in various European countries, and partly because of the continuing pent-up demand for foreign travel resulting from the war and the unsettled postwar period."

Would Further Foreign Policy.—"The Board recognizes that the foreign policy of the United States would be furthered by the maximum flow of American tourist dollars to Europe and by a large number of personal contacts between Americans and the citizens of European countries. The Board is anxious to facilitate air travel to Europe to the greatest extent possible insofar as this can be accomplished without disrupting the certificated air carrier service pattern and creating the necessity of additional government support for our air carriers.

"The Board believes that its desire to accommodate the largest number of air travelers to Europe at the lowest possible fares must be tempered by the existing economics of trans-Atlantic air travel, including the increased mail-pay requirements which would result in the event the accommodation of such travel resulted in a net loss to the carriers. From information available to the Board, it appears that neither the establishment of trans-Atlantic coach service on a regular basis nor a reduction of the over-all trans-Atlantic fare level is justified on the basis of the carriers' cost of operation."

Conference Action Reviewed.—The statement reviewed the action of the International Air Transport Association rate conference in Mexico City on November 8, 1949, which adopted a 15-day round trip excursion fare at a level which is 110 percent of the regular one-way fare.

The statement then continued:

"In view of the availability of this low 15-day excursion fare and the fact that the certificated carriers appear to have ample capacity to handle all traffic during the early months of 1950 on regular flights and on a limited number of charter flights, the Board, as a matter of general policy, does not believe it necessary to approve the various requests which have been received from irregular carriers to provide during the off-peak periods supplementary passenger and group charter service.

"It is obviously impossible to predict with precision the number of trans-Atlantic air travelers who will require transportation during the peak periods of the summer—early summer for eastbound and late summer for westbound. It appears at this time, however, that during the summer of 1950 the certificated carriers will be operating their regular equipment with capacity, or near capacity, loads despite the increased equipment and capacity which most of the U. S.-flag carriers will place in service before the summer of 1950."

Flights Last Summer.—"Last summer the Board permitted certain irregular carriers to operate a limited number of charter trips to Europe for educational, charitable, and religious groups, after it had been ascertained that these groups could not be accommo-

dated by the certificated carriers. It appears that movements of this type may again be required during the summer of 1950.

"Accordingly, the Board will entertain applications for appropriate operating authority from the certificated carriers to engage in group charter operations and special services to points not contained in their certificates, and applications for special exemptions from the irregular carriers, during the period June 1 to September 30. Passengers involved in such movements must be members of bona fide educational, religious, or charitable groups. All such applications must be filed before March 1, but processing of the applications will be undertaken as they are received in order that the groups involved may be advised at the earliest possible time whether their transportation will be approved."

The statement added: "In addition, the Board will also carefully consider the safety compliance record of the applicant irregular carriers and will insert in all exemption orders which may be issued, special safety provisions to assure the conduct of this transportation under the highest standards of safety."

Air Institute Hears CAA and CAB Experts

Aviation experts from the Government, the industry, and national aviation organizations make up the faculty of the fourth annual Air Transportation Institute of the American University January 10 to 27 in Washington, D. C.

D. W. Rentzel, Administrator of Civil Aeronautics, spoke at a meeting on "The Role of Government in Promoting Civil Aviation." Russell B. Adams, member of the Civil Aeronautics Board, is to speak at the closing dinner on "The Outlook in Air Transportation."

The Institute is conducted by the University in cooperation with the Civil Aeronautics Administration and the Air Transport Association of America, with Professor L. M. Homberger as Director.

Subjects on which CAA officials lecture are:

"Design, Construction, and Maintenance of Airports," Paul H. Stafford, chief, Airport Planning Division; "Airways and Traffic Control," Charles W. Carnody, chief, Airport Traffic Control Branch; "Safety," Richard E. Elwell, General Counsel; "Public Relations," Ben Stern, director, Office of Aviation Information; and "Aviation Education," H. E. Mehrens, chief, Aviation Education Division.

Subjects on which CAB officials lecture are:

"The American Air Transportation System," David W. Bluestone, chief analyst, analysis division, Bureau of Economic Regulation; "Entry Into Business; New Routes," Louis W. Goodkind, assistant director, Bureau of Economic Regulation; "Rates," William C. Burt, chief, rates section, legal finance division, Bureau of Law; "Mergers, Consolidations, Contractual Arrangements," James L. Highsaw, Jr., chief, carrier relationships section, Bureau of Law; and "International Organization," Sydney B. Smith, chief, foreign air transport division, Bureau of Economic Regulation.

Aircraft Shipments Off, October Report Reveals

October shipments of civil aircraft totaled 228, amounting to 647,200 airframe pounds, according to a report issued jointly by the Civil Aeronautics Administration and the Bureau of the Census. These figures are down 20 percent and 4 percent respectively from the 284 aircraft and 676,000 pounds airframe weight shipped during September.

Total value of shipments was \$19,162,000, about \$500,000 less than in September but \$7,000,000 higher than in October 1948.

Complete figures on October civil aircraft shipments show:

Civil Aircraft Shipments, October 1949

	1949		1948
	October	September	October
Number (total)	228	284	502
Number by type:			
Personal	216	271	476
Transport	12	13	26
Number by place:			
1- and 2-place	49	81	156
3- to 5-place	167	190	320
Over 5-place	12	13	26
Airframe Weight (thousand lbs.)	647.2	676.0	794.2
Personal	160.3	191.0	389.8
Transport	486.9	485.0	404.4
Value (thousand dollars)	\$19,162	\$19,705	\$12,184
Complete aircraft	14,510	14,102	8,407
Parts	2,572	3,761	2,067
Other products	2,080	1,842	1,710

The number of civil aircraft shipped in the first 10 months of 1949 was 3,271 with 5,634,300 airframe pounds. This output was down 52 percent and 37 percent respectively from the 6,750 aircraft and 8,894,900 airframe pounds shipped in the same period of 1948. The monthly figures on number of aircraft and airframe weight shipped during the first 10 months of 1948 and 1949 appear below:

Civil Aircraft Shipments, January-October

Month	1949		1948	
	Number	Airframe wt.	Number	Airframe wt.
January	160	280,600	462	460,500
February	257	774,900	461	574,600
March	400	710,000	578	701,500
April	456	571,600	766	840,200
May	474	451,700	812	1,397,600
June	439	537,900	959	1,370,300
July	301	478,400	920	977,500
August	272	506,000	700	949,600
September	284	676,000	590	828,900
October	228	647,200	502	794,200
Total	3,271	5,634,300	6,750	8,894,900

Revised CAM 18 Goes on Sale

A revised edition of Civil Aeronautics Manual 18, "Maintenance, Repair, and Alteration of Certificated Aircraft, Engines, Propellers, and Instruments," went on sale last month. The publication supersedes the edition of June 1, 1943.

The manual contains material interpreting and explaining the maintenance, repair, and alteration requirements specified in Civil Air Regulations, Part 18. The manual is on sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The price, which includes the supplementary service, is \$1.25. For that price, the purchaser receives the manual and supplements embodying textual revisions.

Rentzel Takes Action On Suggestions Made By Airports Committee

D. W. Rentzel, Administrator of Civil Aeronautics, has replied to the letter from A. B. Curry, Chairman of the CAA's Airports Advisory Committee, in which recommendations of the Committee were submitted to the Administrator.

Mr. Rentzel's letter follows:

"This will somewhat belatedly acknowledge receipt of the Airports Advisory Committee's report to me dated October 4, 1949. I have had an opportunity to study your report in detail and have taken steps to put into effect a number of the recommendations made by the Committee. As a whole, I feel the report amply justifies the immense amount of time and work the Committee gave to these problems.

"Regarding recommendation (No. 1) for 'Continuation of the Federal Airport Act,' we will recommend that the termination date of the Federal Airport Act either be extended or eliminated. It is our thought that inasmuch as this is an authorization act to provide for annual appropriations totaling \$520,000,000 with a termination date of June 30, 1953, and that a maximum of \$100,000,000 can be appropriated in any one fiscal year, that at this time an extension or elimination of the termination date should be requested by recommending an amendment to the Act when Congress reconvenes.

"Recommendation (No. 2) 'State Legislation to Exempt Commercial and Privately Owned Fields from Tax,' has been referred to our General Counsel's office for study. Their study will be forwarded to you on or about December 1, with supporting material.

"Recommendation (No. 4) with reference to 'Technical Standard Order N-13,' has been referred to the Office of Federal Airways with request as to the feasibility of carrying out this recommendation. Their views will be available to the Committee by December 1.

"Recommendation (No. 5) 'Fostering Aviation,' has been referred to the Office of Aviation Development with request that complete plans, including costs, for carrying out the recommendation, be submitted in writing to me by November 20.

"With reference to recommendation (No. 6) on the 'Functional Design for Airport Terminal Buildings,' we are in the process of establishing in the Engineering Division, Office of Airports, a position of an Architect who will have the responsibility of carrying out the recommendations of the Committee in this respect.

"In connection with recommendation (No. 7) pertaining to the 'Abandonment of Existing Airports,' I am pleased to advise that the Office of Airports is taking the necessary steps to strengthen their staff to effectuate this recommendation. It is anticipated that some material results will be in evidence within the next few months.

"With respect to recommendation (No. 8) 'Air Star Routes,' this is a matter in which we have a great deal of interest but no control. Therefore, we have called it to the attention of the Civil Aeronautics Board and have requested the Office of Airports to set up a liaison for furthering with the Post Office Department and the Civil Aeronautics Board the recommendations of the Committee.

"The Committee recommendation (No. 9), urging passage of an Amendment to the Federal Airport Act providing for redistribution of unused State apportioned funds has become Public Law 382, with an effective date of January 23, 1950.

"With reference to recommendation (No. 10) concerning 'International Agreements Pertaining to Air-

Air Regulations . on January 1, 1950

TITLE	No.	PART			MANUAL		
		Price	Date	No. of Amendments	Price	Date	No. of Supplements
Aircraft							
Airworthiness Certificates.....	1	\$0.05	5/10/49		None	None	
Type and Production Certificates.....	2	.05	8/1/49	1	\$0.10	8/1/46	
Airplane Airworthiness; Normal, Utility, Acrobatic, and Restricted Purpose Categories.....	13	.15	11/1/49	2	None	None	
Airplane Airworthiness.....	14a			2	.45	7/1/44	
Airplane Airworthiness; Transport Categories.....	14b	.20	10/1/49	2	None	None	
Rotocraft Airworthiness.....	6			2	None	None	
Aircraft Airworthiness; Limited Category.....	9	.05	11/1/49	1	None	None	
Aircraft Engine Airworthiness.....	13	.05	8/1/49	1	None	None	
Aircraft Propeller Airworthiness.....	14	.05	11/1/49	1	.15	5/1/46	
Aircraft Equipment Airworthiness.....	15	.05	11/1/49	2	No stock	7/1/38	
Aircraft Radio Equipment Airworthiness.....	16	.05	2/13/41		No stock	2/13/41	
Maintenance, Repair, and Alteration of Certified Aircraft and of Aircraft Engines, Propellers, Instruments.....	18	.05	8/15/49		.60	6/1/43	
Airmen							
Pilot Certificates.....	20	.05	8/1/49	2	None	None	
Airline Transport Pilot Rating.....	21	.05	8/15/49	1	None	None	
Lighter-than-air Pilot Certificates.....	22	.05	11/1/49		None	None	
Mechanic Certificates.....	24	.05	9/1/49	(2)	None	None	
Parachute Technician Certificates.....	25	.05	11/1/49		None	None	
Air-traffic Control-tower Operator Certificates.....	26	.05	11/1/49		None	None	
Aircraft Dispatcher Certificates.....	27	.05	11/1/49		None	None	
Physical Standards for Airmen.....	29	.05	10/1/49	1	None	None	
Flight Radio Operator Certificates.....	33	.05	11/1/49		None	None	
Flight Navigator Certificates.....	34	.05	11/1/49		None	None	
Flight Engineer Certificates.....	35	.05	11/1/49		None	None	
Operation Rules							
Air Carrier Operating Certification.....	40	.05	9/1/49	(2)	None	None	
Certification and Operation Rules for Scheduled Air Carrier Operations Outside the Continental Limits of the United States.....	41	.05	11/15/49	1	None	None	
Irregular Air Carrier and Off-Route Rules.....	42	.10	6/1/49	(1) 3	\$1.00	9/1/49	
General Operation Rules.....	43	.05	8/1/49	1	None	None	
Foreign Air Carrier Regulations.....	44	.05	9/1/49		None	None	
Commercial Operator Certification and Operation Rules.....	45	.05	11/15/49	(1) 1	None	None	
Operation of Moored Balloons.....	48	.05	9/1/49		None	None	
Transportation of Explosives and Other Dangerous Articles.....	49	.10	7/20/49		None	None	
Air Agencies							
Airmen Agency Certificates.....	50	.05	10/1/49	(1) 1	.15	5/15/46	
Ground Instructor Rating.....	51	.05	10/10/49		None	None	
Repair Station Rating.....	52	.05	10/15/49		No stock	2/41	
Mechanic School Rating.....	53	.05	10/15/49		Free	5/40	
Parachute Loft Certificates and Ratings.....	54	.05	10/15/49		.15	7/1/48	
Air Navigation							
Air Traffic Rules.....	60	.10	8/1/49		1.00	8/1/49	
Scheduled Air Carrier Rules.....	61	.10	9/1/49	1	None	None	
Notice and Reports of Aircraft Accidents and Missing Aircraft.....	62	.05	5/1/49		None	None	
Miscellaneous							
Rules of Practice Governing Suspension and Revocation Proceedings.....	97				None	None	

¹ Certain aircraft may comply with the provisions of this part or part 4a.

² Special regulation SR-340.

³ Special regulations SR-333, SR-335, SR-341.

⁴ Special regulations SR-334, SR-337.

⁵ Special regulation SR-337.

⁶ Special regulation SR-336.

⁷ Combined with Flight Information Manual, Vol. 4, No. 1.

⁸ Special regulations SR-334, SR-341.

⁹ Special regulation SR-339 extends effective dates of Amendments 2-1, 3-1, 4a-3, 4b-1, 6-3, 13-1, 14-1, and 15-1, requiring

the installation of fireproof identification plates until March 7, 1950.

NOTE: Those parts and manuals for which there is a price are obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Remittances should be by check or money order, payable to the Superintendent. Currency is sent at sender's risk. Amendments, Special Regulations and free Parts are obtained from the Publications Section, Civil Aeronautics Board, Washington 25, D. C.; Supplements and free Manuals from the CAA Office of Aviation Information, Dept. of Commerce, Washington 25, D. C.

port Fees and Charges,' this matter has been referred to the Administrator of our International Region with a request that his organization observe this recommendation.

"Your comments with reference to the regulations pertaining to the Federal Airport Program are greatly appreciated. Amendments to the Federal Airport Act and changing conditions require continuous study in order that the best practices and standards may be established for administering the Act. You can be assured that we are not stopping with what has already been done but are making every effort to further the best relations with the sponsors and the public.

"With reference to recommendation (No. 12) 'Land Cost for Airport Development,' no action was taken by the Congress on the proposed amendments S. 1281 or H. R. 4199, which would provide for Federal participation of 50 percent for land acquisition

costs. These bills remain in the same status as when the first session of Congress closed and will be in line for enactment in the Second Session of the 81st Congress. We will continue to urge passage of this amendment.

"As to item (No. 3), 'Caster Landing Gear' not covered above, I am aiming at one thing, to build airports with all runways traffic bearing at all times to provide for simultaneous use as far as possible. I believe we are pretty much in agreement and hope that through our restatement of policy dated October 30, 1949, most of the misunderstanding that had grown out of a previous statement of policy will be cleared up.

"I wish again to express my high regard for the opinions of your Committee. As we work together and tackle the problems which confront us from day to day, I feel more and more compelled to look to your Committee for aid in assisting me to arrive at the all important right decisions."

Airlines of United States Have Good Year

As 1949 Statistics Reveal Important Gains

(Continued from page 1)

own aggressive programs of selling air travel to people who had never flown before.

"The safety record achieved in 1949 reflects the continuing and growing knowledge of safe operating methods and practices," Mr. Rentzel said in discussing the year's flying activities. "We have more and better air navigation aids than ever before. We have better and closer cooperation between the operators and the CAA. We can expect this record to continue to get better, because our aids are improving, and our knowledge is increasing."

By the end of the year the CAA estimated it was 59 percent along the way toward complete revision of the Federal airways from low to very high frequency radio aids. Of the approximately 400 VHF ranges which will blanket the country, 370 are in, and most of those are either in operation or ready to be turned on. At 89 points, 87 in the continental United States and 2 in Alaska, instrument landing systems are in daily use. At most of the communications stations and traffic control centers, CAA communications are conducted on VHF radio, which is static-free, a most welcome and valuable feature in aircraft operation.

As a result of the growing use of the landing aids, including the instrument landing system and the precision beam radar equipment, United States airlines have continued to increase the regularity of their scheduled operation without any reduction in the standards of safety. Late in the year Southwest Airways was allowed to land at Arcata, Calif., where the Landing Aids Experiment Station is located, under a 100-foot ceiling and with visibility as low as a quarter of a mile. Braniff Airways has been landing with ceilings of 200 feet and forward visibility of half a mile for many months, and applications from other lines for still further reducing their minimums are constantly under study in CAA offices. During the year 400 procedures for instrument approach using radio ranges, 86 ILS (instrument landing system) procedures and 60 ADF (automatic direction finder) procedures were established by the CAA.

Air Transport Safety Promoted.—CAA took special and positive steps in promoting air transport safety during the year by sending teams of supervisory safety agents into the fields for conferences with air carriers on operating problems. These teams worked also with CAA aviation safety agents assigned to individual airlines to improve safety procedures. Another CAA safety practice grew rapidly during the year. This was the use of the "daily mechanical report" filed by air carriers on mechanical difficulties encountered in routine operation. Analysis of these reports and continual application of the findings now have the enthusiastic endorsement of all operators and CAA officials.

Accidents in non-air-carrier flying indicated a poorer safety record for the year than in 1948, with 4,000 of the estimated 6,000 accidents analyzed. Of these 4,000, there were 421 fatal accidents in 1949 as against 392 in the first 4,000 in 1948. Instructional flying, which dropped sharply in 1949, accounted for 26.4 percent of the 4,000 accidents in 1949 as against 40.4 percent in 1948, while the percentage of non-commercial accidents, i. e., private flying, rose from 53 percent in 1948 to 58.5 percent.

Stall Warning Devices Increased.—CAA estimates that at least 10,500 civil aircraft are either equipped with stall warning indicators or certified as stall-proof. These indicators became standard equipment on many planes during 1949, and in the first 9 months, 1,981 new planes were so equipped, bringing the total of manufactured planes so equipped to 3,868. In addition, there were some 4,400 stall-

proof Ercoupes in being and many other private owners have had indicators installed.

Agricultural flying increased in 1949, with one outstanding service chalked up by airplanes for farmers and grazers. Forty-three airplanes attacked a plague of grasshoppers on Northwest ranges and crop lands, and stopped them practically as fast as they were born. A total of 2,700,000 acres were treated with poisoned bait spread from the air.

Towns and communities continued to hire pilots to spray for control of insect pests, and CAA records showed 262 communities had bought this service as against 119 in 1948. There was a general increase in other agricultural flying such as weed control, seeding, and fertilizing.

Plans were completed for the development of a special plane for such uses, with the CAA and the Department of Agriculture cooperating in financing of the project and the work to be done by the personal plane department of the Texas A. & M. College system. The plane will be a prototype only and the CAA will turn over to manufacturers all information useful for manufacture. Dispensing equipment will be developed under supervision of the Department of Agriculture. The National Flying Farmers Association also has been participating in the project.

More Radio Equipment Bought.—Plane owners increased the tempo of their purchase of radio equipment during the year, indicating their increased use of the new omniranges and VHF communications equipment. VHF personal plane equipment, on the market in attractive forms from several manufacturers, was proving its value in actual flying through the use of the CAA's new VHF omniranges.

The CAA in 1949 completed organization of its Tenth or International Region. All of its international activities are now gathered under one directing head, and they include foreign offices at London, Paris, and Cairo in the European area; Tokyo, Manila, and Bangkok in the Pacific area; and Balboa, Lima, Rio de Janeiro, and Buenos Aires in the Central and South American area. Six international district offices, at New York, Kansas City, Minneapolis, San Francisco, Fort Worth, and Miami are in direct charge of these foreign offices, and also handling problems of the international carriers whose headquarters are in their areas.

CAA also showed its airways development to the world in an international air exposition at Paris, France, in 1949, and continued its demonstrations to aviation representatives of other nations at its Indianapolis Technical Development center.

Cross-Wind Gear Use Gains.—Two important CAA developments, the cross-wind landing gear and the slope line approach system came into effect during 1949. The slope line system was installed and in use at Idlewild International Airport, New York, and was nearing completion at Los Angeles and Washington. A survey of dealers who had sold more than 200 cross-wind gear installations revealed that a preponderance of the owners were highly pleased with the contributions made by this gear to the utility and safety of their airplanes. Application of the gear to transport planes was demonstrated in Central America when the CAA's DC-3 toured Colombia and Venezuela. It was later assigned for a 6-month period to the Air Force at Wright Field, where the implications of the new gear will be exhaustively studied by Air Force engineers.

The aircraft division of the CAA, faced with the prospect of jet-powered transports on United States airlines, prepared for the mass of new problems which certification of these craft will present. A CAA engineer spent 9 months in England in the "Empire Jet School" studying Britain's accomplishments in this

field, and all CAA personnel directly concerned attended exhaustive lectures and forums on the subject.

In addition, aviation safety agents will spend considerable time at aircraft factories where new developments will be studied. Such problems as traffic control of 500-mile an hour jet transports, care of passengers in pressurized cabins at 40,000 feet, use of jet-assist in take-off of transports at airports 2 or 3 miles above sea level are the concern of these agents.

By the end of the year, the CAA had made an estimated 1,093 grant offers for projects on airports in the Federal aid airport program, with a total of \$99,080,000 in Federal money affected. This meant that Federal aid was being used on 1,093 projects at 783 different locations. This program, now in its fourth year, involves work on 228 class 1 airports, 244 class 2, 244 class 3, and 340 class 4 and larger.

Mid-Continent Application For Alternate Route Denied

The Civil Aeronautics Board has denied the application of Mid-Continent Airlines for an alternate route from Kansas City to New Orleans, via Springfield, Mo., Little Rock and El Dorado, Ark., Monroe and Baton Rouge, La. Mid-Continent now operates between Kansas City and New Orleans by way of Joplin, Tulsa, Muskogee, Fort Smith, Texarkana, and Shreveport.

The Board, in denying Mid-Continent's application, said that the proposed additional service would compete with Mid-Continent's original route between the points, and with Delta, Eastern, and Chicago and Southern, over a route with a limited traffic potential. The Board said that in view of the competitive situation, coupled with the fact that the new route would involve substantial additional capital outlays and operating expenses, it appeared that the granting of the application would weaken rather than strengthen Mid-Continent and increase the amount of its dependence upon Government support through mail payments.

In the same opinion, the Board deferred the application of Delta Air Lines to include Monroe, La., as an intermediate point between Shreveport and Alexandria on the Fort Worth/Dallas-New Orleans segment of route No. 24, for consideration with the *Reopened Mississippi Valley and Southeastern States* cases.

September Mileage Figures Released

The 16 domestic trunk airlines flew 99.32 percent of their scheduled mileage in September 1949, the Civil Aeronautics Board reported in a statement released last month. Of the 36.45 average available seats per mile in September 1949, 63.45 percent were occupied by revenue passengers, as compared with 33.94 average available seats, of which 59.91 percent were occupied by revenue passengers in September 1948.

Airport Design Problems Discussed

Basic information to aid in working out details of a sound program of airport development is available in a publication of the Civil Aeronautics Administration entitled "Airport Design." The booklet is on sale at 30 cents a copy by the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Airport Accounting Data Given

"Airport Financial Statements" is a Civil Aeronautics Administration publication designed as a guide for airport accountants and those dealing with airport finances. It is on sale at 15 cents a copy by the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Official Actions Civil Aeronautics Board

Regulations

SR-339-----Effective December 6, 1949

Amendments 2-1, 3-1, 4a-3, 4b-1, 6-3, 13-1, 14-1, and 15-1, adopted November 2, 1949, require the installation, after December 6, 1949, of a fireproof identification plate on the several products manufactured in accordance with the requirements of each part. The Board said that certain manufacturers have as yet been unable to obtain the required fireproof plates, but that such plates can be obtained before March 7, 1950. The Board, therefore, by this Special Civil Air Regulation, extended the date for compliance with these requirements until that time, so that deliveries of aircraft and aircraft components will not be interrupted.

Amdt. 20-6-----Effective November 16, 1949

Amends Part 20 of the Civil Air Regulations by amending § 20.11 to read as follows:

20.11 Graduates of certificated flying schools. A graduate of a certificated flying school shall be deemed to have met the aeronautical experience requirements of this part, if he presents an appropriate certificate of graduation within 60 days after graduation date: *Provided*, That an individual who has completed a flight instructor course shall not be eligible for such rating unless he has a commercial pilot rating, or if he holds a private pilot rating he has met the aeronautical experience requirements of § 20.35, and an individual who has completed an instrument flight course shall not be eligible for such rating unless he has a commercial pilot rating, or if he holds a private pilot rating he has had at least 150 hours as pilot in command, of which not less than 50 hours shall be cross-country, in addition to the time acquired in such course.

The Board issued the following explanatory statement regarding this amendment:

"Section 20.11 of the Civil Air Regulations permits a graduate of a certificated flying school to obtain a rating without fully complying with the otherwise prescribed aeronautical experience requirements. Thus § 20.11 was intended to permit the graduate of such a school to obtain a commercial pilot rating with as little as 160 hours of actual flight experience, although § 20.35 requires 200 hours thereof, or a private rating in conventional aircraft with but 35 hours of flight experience, whereas § 20.25 requires 40 hours. Since the adoption of § 20.11 there have also been established approved courses for flight instructor and instrument flight ratings. Prior to the establishment of such courses the former rating required a minimum of 160 hours of aeronautical experience, and the latter a minimum of 150 hours thereof. Since the establishment of such courses, a few individuals who have considerably less experience than that indicated above have claimed that § 20.11 gave them a right to obtain a flight instructor rating or instrument rating upon successful completion of the prescribed curriculum.

"Therefore, we deem it necessary in the interest of the public to clarify the scope of the privilege granted by § 20.11 by indicating that a flight instructor or instrument flight rating may not be issued even upon completion of an approved course of instruction unless the applicant possesses the basic aeronautical experience we deem essential for air safety."

Amdt. 29-1-----Effective December 21, 1949

Amends Part 29 of the Civil Air Regulations by amending § 29.5 to read as follows:

29.5 Waiver physical standards. An airman certificate shall be issued to an applicant who does not meet the appropriate physical standards if the Administrator finds that the applicant's operational record, ability, and judgment as an airman compensate for his physical deficiency and he meets all other requirements for the issuance of said certificate. Such certificate may be limited as to type of operation, type of aircraft, or period of reexamination.

In announcing the amendment, the Board issued the following explanatory statement:

"Part 29 currently provides that an airman certificate shall be issued to an applicant other than an applicant for the original issuance of an airline transport pilot certificate who does not meet the appropriate physical standards if his aeronautical experience, ability, and judgment compensate for his physical deficiency and he meets all other requirements for the issuance of such certificate.

"This amendment provides for the original issuance of airline transport pilot certificates to applicants who do not meet the appropriate physical standards for the issuance of such certificates, but who meet all other certificate requirements, and whose airman operational experience, ability, and judgment compensate for their physical deficiency.

"In this connection it should be noted that under current regulations an airline transport pilot can acquire a physical disability after the original issuance of his airline transport pilot rating, and, if he is able to compensate for such deficiency, be eligible to continue to exercise the privileges of such rating. However, had such an individual acquired this same deficiency prior to the original issuance of the rating, he would not, under current regulations, be able to obtain it. The Board does not at this time believe that there is any sound reason for this distinction.

"This amendment is necessary at this time for the following reason. Part 42, as revised, requires that all pilots serving as pilots in command of large aircraft in irregular air carrier operations shall, after December 31, 1949, possess valid airline transport pilot ratings. Prior to such revision pilots operating under Part 42 were required to hold only a commercial rating which may be obtained even though an applicant is unable to meet all of the prescribed physical standards for the issuance of such rating. We have been advised that several pilots, employed for considerable periods of time as pilots in command of large aircraft operated by irregular air carriers, are unable to meet the physical requirements for the original issuance of airline transport pilot certificates. Under current regulations these pilots would not be able to continue in their employment, even though it may be shown that they can competently and safely perform their duties. It is believed that there are a number of pilots whose operational experience, ability, and judgment justify the issuance of airline transport ratings even though they may not fully meet the physical

standards for the original issuance of an airline transport pilot certificate. This amendment will enable such pilots to obtain airline transport pilot certificates.

"In addition, this amendment clarifies the meaning of the phrase 'aeronautical experience' as currently used in § 29.5. That phrase has been interpreted as having the same connotation when used in that section as when used in the airman certification parts of the Civil Air Regulations, that is, to mean merely the specified total number of flying hours or years of experience required to obtain an airman certificate. However, such phrase, for the purposes of § 29.5, should be interpreted as including an evaluation and finding by the Administrator of the quality of the applicant's past performance as an airman to determine whether he is competent to perform safely the duties of the airman certificate applied for, notwithstanding his physical deficiency. Accordingly, the phrase 'operational record as an airman' is substituted for the phrase 'aeronautical experience'.

"This amendment does not require the airman certificate issued to a pilot not meeting the prescribed physical standards to be endorsed as currently prescribed. We have been advised by the Administrator of Civil Aeronautics that in his opinion such an endorsement is unnecessary to insure that holders of airman certificates perform safely the duties authorized by such certificates, and therefore this requirement imposes an unnecessary administrative burden upon his staff. The Board concurs in the Administrator's opinion in this regard."

PR-4-----Effective March 1, 1950

Establishes a new Part 301 of the Board's Procedural Regulations entitled "Rules of Practice in Air Safety Proceedings" and rescinds Part 97 of the Civil Air Regulations, effective March 1, 1950.

In releasing the text of Part 301, the Board made the following explanatory statement:

"Part 97 of the Civil Air Regulations currently provides rules of practice in cases arising under sections 602 and 609 of the Civil Aeronautics Act of 1938, as amended, and petitions for waiver of Civil Air Regulations. Experience since 1946 when the last major revision of the rules was promulgated has indicated the need for some modification of existing rules. It is also believed desirable to rearrange the sequence of the rules to correspond with the chronology of a proceeding from its initiation through final Board consideration. There have also been added provisions establishing procedures for handling requests for rule making."

PR-5-----Effective December 20, 1949

Amends Part 302 of the Procedural Regulations by adding a new section 302.19 prescribing procedures to be followed in informal mail rate conferences.

Suspensions

Commercial pilot certificate of Donald M. Cox, Miami, Fla., suspended 90 days from November 15, 1949, for low flying and for performing acrobatics with a passenger over a congested area of Miami.

Private pilot certificate of Joe Ramsey Morris, Knoxville, Tenn., suspended 8 months from November 15, 1949, for low flying over a boat dock on a flight which ended in a crash when the plane struck a power line.

Private pilot certificate of Robert E. Gradine, Duluth, Minn., suspended 6 months from November 8, 1949, for low flying and for engaging in acrobatic flight below an altitude of 1,500 feet.

Private pilot certificate of Glenn R. Brinker, Cleveland, Ohio, suspended 6 months from November 8, 1949, for low flying in the vicinity of Veterans Hospital, Parma, Ohio.

Private pilot certificate of James N. Maupin, Bradford, Ill., suspended 6 months from November 17, 1949, for low flying over a congested area.

Private pilot certificate of Stanley J. Cox, Watska, Ill., suspended 90 days from November 8, 1949, for piloting an aircraft, carrying a passenger, after sunset without displaying position lights. The plane struck a power line but he was able to land without injury to himself or his passenger.

Private pilot certificate of Robert A. Lukon, Chicago, Ill., suspended 60 days from November 17, 1949, for low flying over a congested area of Chicago.

Private pilot certificate of George R. Pearson, Akron, Ohio, suspended 4 months from November 24, 1949, for low flying over a congested area and for operating an aircraft in acrobatic flight within a civil airway.

Private pilot certificate of Harry Leon May, Sebring, Ohio, suspended 6 months from November 17, 1949, for low flying over a congested area on a flight which ended in a crash when the plane struck a power line.

Student pilot certificate of Marvin L. Blankenship, North Little Rock, Ark., suspended 1 year, for performing acrobatics at low altitude over a congested residential area of Little Rock.

Commercial pilot certificate of Herman Albert Barnett, Austin, Tex., suspended 6 months from October 28, 1949, for low flying and for performing acrobatics at low altitude over a congested area of Austin.

Commercial pilot certificate of William Howard Wisner, Mincola, Tex., suspended 30 days from November 26, 1949, for disregarding the instructions of control tower operators at Love Field and Hensley Field.

Private pilot certificate of Oscar C. Flint, Jr., San Antonio, Tex., suspended 90 days from November 7, 1949, for failing to conform to the traffic pattern at Stinson Field and for failing to have his pilot and medical certificates in his possession.

Private pilot certificate of Edward Elden Lobdell, South Fargo, N. Dak., suspended 6 months from November 9, 1949, for operating an aircraft over Kansas City, Mo., for a carelessly extended period of time, while sightseeing, thereby exhausting his gasoline supply, with the result that he made a forced landing during the hours of darkness in a congested area. He attempted to land in Rupert Stadium while the flood lights were on after the completion of a night baseball game but he was forced to change his plans when a ball park attendant turned out the lights. The pilot then attempted to land in a nearby public school athletic field and crashed against a wire fence.

Commercial pilot certificate of Jerome Michael Blaine, St. Louis, Mo., suspended 6 months from November 4, 1949, for low flying

and for engaging in acrobatic maneuvers at an altitude of less than 1,500 feet.

Mechanic certificate of Wayne G. Zaclie, Gunnison, Colo., suspended 30 days from November 4, 1949, for permitting repairs to be made by a person or persons who were not certificated mechanics having the proper ratings and who were not working under the direct supervision of a certificated mechanic.

Commercial pilot certificate of Raymond Jewell Woods, Nauvoo, Ill., suspended 10 days from November 3, 1949, for operating an aircraft at night when position lights were not displayed.

Student pilot certificate of Philip Russell Conrath, Webster Groves, Mo., suspended until April 5, 1950, for performing acrobatics at low altitude over a congested area and within a civil airway.

Private pilot certificate of Charles L. Weatherall, Oxnard, Calif., suspended 6 months from November 4, 1949, for piloting an aircraft which had not been given an annual inspection within the preceding 12 months, and for piloting an aircraft after dark without displaying position lights.

Private pilot certificate of Sherman Neil Anderson, Roosevelt, Utah, suspended 90 days from October 26, 1949, for engaging in acrobatic maneuvers when neither he nor a passenger were equipped with parachutes.

Private pilot certificate of Gerardo B. Olivas, Tucson, Ariz., suspended 90 days from October 26, 1949, for operating an aircraft in a careless manner by piloting the plane into telegraph wires while practicing forced landings, resulting in a crash.

Private pilot certificate of J. A. Harroun, Portland, Ore., suspended 90 days from November 9, 1949, for low flying and "buzzing" a congested area in the vicinity of his home.

Private pilot certificate of Robert Allen Ferguson, Auburn, Mich., suspended 60 days from November 8, 1949, for performing acrobatics with a passenger when neither occupant of the plane had a parachute, and for performing acrobatics within a civil airway.

Commercial pilot certificate of Gaylord F. Stidham, Ephrata, Wash., suspended 30 days from November 22, 1949, for serving in the capacity of flight instructor when he did not hold a flight instructor's rating.

Private pilot certificate of Bennie L. Wilson, Blackfoot, Idaho, suspended 1 year from November 1, 1949, for diving towards and buzzing potato pickers in the vicinity of Pith and Blackfoot, Idaho, on a flight which ended in a crash in which the pilot and his passenger were slightly injured.

Private pilot certificate of John N. Jennings, Olympia, Wash., suspended 60 days from November 2, 1949, for failing to familiarize himself with all available weather data before undertaking a flight, for flying through clouds, and for failing to conform to the traffic patterns at two airports.

Revocations

Private pilot certificate of Robert John Gillon revoked, for low flying with a passenger over a congested area of Akron, N. Y.

Student pilot certificate of Bertram Silberg, Westfield, N. J., revoked, for low flying over a congested area.

Student pilot certificate of Thomas R. Byrne, Hightstown, N. J., revoked, for flying at an altitude of only a few feet above a schoolyard where many children were gathered.

Student pilot certificate of Bruce W. Dutter, Ogdensburg, N. Y., revoked, for carrying a passenger.

Commercial pilot certificate of Roland Beck, Lexington, N. C., revoked, for performing loops, dives, steep pull-ups, and other acrobatic maneuvers at low altitudes over an airport for approximately 15 minutes. On one of the low passes across the field, the aircraft stalled and crashed into trees bordering the field.

Private pilot certificate of George M. Koppinger, New England, N. Dak., revoked, for carrying passengers for hire in violation of § 43.60.

Private pilot certificate of Landis Herbert Blake, Effingham, Ill., revoked, for engaging in acrobatic flight with a passenger, when neither occupant of the plane was equipped with a parachute, and for operating the aircraft over an open-air assembly of persons at altitudes below the minimums. The plane struck a wire and crashed into some trees.

Student pilot certificate of Kenneth Nielsen, Mapleton, Minn., revoked, for carrying a passenger.

Private pilot certificate of Delmar D. Hepler, Mishawaka, Ind., revoked, for carrying two passengers in the rear cockpit of an aircraft equipped for only one passenger. In attempting to take off, he collided with a power line and crash-landed into a nearby field. The aircraft was damaged but the occupants escaped without injury.

Student pilot certificate of Elton O. Grant revoked, for piloting an aircraft which was not in an airworthy condition on a cross-country flight from Brownwood to San Angelo, Tex., while he was under the influence of intoxicating liquor.

Student pilot certificate of Lynde Lynch, Crane, Tex., revoked, for carrying a passenger on a flight which ended in a forced landing in which the plane was damaged.

Student pilot certificate of Ernest Lee McLaughlin, San Angelo, Tex., revoked, for carrying a passenger.

Student pilot certificate of Carl Edward Porcher, San Antonio, Tex., revoked, for performing acrobatic maneuvers at low altitudes over a congested area outside the designated practice area.

Private pilot certificate of Joseph P. Haggerty, Monroe, La., revoked, for removing a plane from a hangar at Selman Field without permission of the owner and performing acrobatic maneuvers over the field at low altitudes on a flight which ended in a crash.

Private pilot certificate of Leonard Louis McGee revoked, for performing acrobatics while carrying a passenger when neither occupant of the plane had a parachute. The flight ended in a crash near Municipal Airport, San Antonio, Tex.

Student pilot certificate of Francis R. Krejci, Omaha, Nebr., revoked, for carrying a passenger on a flight which ended in a crash when he attempted a landing during a period of limited ground visibility.

Student pilot certificate of Vernon Texley, Toronto, S. Dak., revoked, for carrying passengers, for operating an aircraft on more than one occasion while he was under the influence of intoxicating liquor, for failing to report an accident, and for other CAR violations. The Examiner ordered that he shall not be issued any type of pilot certificate prior to November 15, 1954.

nor thereafter until he has demonstrated in a proceeding before the Board, his qualifications to hold a certificate.

Commercial pilot certificate of Lyman C. Brandt, Kansas City, Kan., revoked, for failing to surrender his pilot certificate after it had been suspended for 6 months by order of the Board.

Commercial pilot certificate of William C. Lindner, Denver, Colo., revoked, for presenting falsified documents regarding his military flight status in applying for a pilot certificate.

Student pilot certificate of Henry E. Bishop, Sacramento, Calif., revoked, for performing acrobatic maneuvers at low altitudes over a congested area and within the traffic pattern of McClellan Field, Sacramento, Calif.

Private pilot certificate of Richard C. Wachtel, San Angelo, Tex., revoked, for carrying passengers for hire.

Private pilot certificate of Anthony J. Sousa, Ferndale, Calif., revoked for low flying over a congested area, for flying a plane, carrying passengers, at night when the plane was not equipped with certificated forward and rear position lights, and for other CAR violations.

Private pilot certificate of Paul Richard Gylling, Long Beach, Calif., for performing acrobatics over Wickenburg, Ariz., at low altitude, and for piloting an aircraft while he was under the influence of intoxicating liquor. The plane struck a power line and crashed, resulting in serious injuries for the pilot and his passenger.

Private pilot certificate of Vincent Hughes South, San Francisco, Calif., revoked, for low flying and performing acrobatic maneuvers on three occasions while carrying a passenger.

Private pilot certificate of Donald Elliott, Olympia, Wash., revoked, for carrying passengers in an aircraft which was not in an airworthy condition, resulting in a crash in which a passenger was killed and the pilot was seriously injured.

Private pilot certificate of Jack Fleming, Johnston City, Ill., revoked, for low flying over a rural residence, ending in a crash in which he was injured and his passenger killed.

Temporary private pilot certificate of Harry Melvin Potts, Piqua, Ohio, revoked, for low flying and performing acrobatics with a passenger on a flight which ended in a crash.

Private pilot certificate of William E. Rogers, Vandalia, Ill., revoked, for flying at an altitude of less than 100 feet above a person on the surface, ending in a crash in which the aircraft was demolished but he and his passenger escaped with minor injuries.

Student pilot certificate of Charles Hammer, Kansas, Ohio, revoked, for carrying a passenger and for other CAR violations.

Private pilot certificate of Clement Anthony Appert, Hazelton, N. Dak., revoked, for piloting an aircraft, carrying a passenger, when the aircraft had not been given an annual inspection within the preceding 12 months.

Private pilot certificate of Thomas Hendrick, El Paso, Tex., revoked, for performing acrobatic maneuvers over a congested area at low altitude, for performing acrobatic maneuvers within a civil airway and control zone, and for failing to have a valid pilot certificate in his personal possession.

Private pilot certificate of J. E. Jacques, Denison, Tex., revoked, for performing acrobatic maneuvers with a passenger when the occupants of the plane did not have parachutes, for performing acrobatics at low altitude, and for piloting an aircraft while he was under the influence of intoxicating liquor.

Student pilot certificate of Robert Hugh Benear, Meade, Kans., revoked, for carrying a passenger and for low flying on a flight in which he crashed while hunting coyotes, resulting in serious injuries to himself and his passenger.

Private pilot certificate of Earl Eugene Blanchat, Wichita, Kans., revoked, for low flying and performing acrobatics at low altitude over a congested area, and for engaging in acrobatic flight within a civil airway and control area.

Private pilot certificate of Robert J. Leary, Kansas City, Mo., revoked, for low and acrobatic flight over a congested area and for engaging in acrobatic flight within a civil airway and control zone.

Private pilot certificate of Paul Earl Pitcher, Olympia, Wash., revoked, for low flying on a flight which ended in a crash.

Student pilot certificate of Joseph Arthur Trudeau, Port Angeles, Wash., revoked, for carrying a passenger and for other CAR violations.

Private pilot certificate of Daniel J. Sullivan, Wolf Point, Mont., revoked, for low flying on a flight which ended in a crash in which his wife was fatally injured.

Student pilot certificate of Charles Don Laurie, Republic, Wash., revoked, for carrying a passenger on a flight which ended in a crash in which he and the passenger were injured.

Student pilot certificate of Robert Lynn Gilliam, Payette, Idaho, revoked, for carrying a passenger and for other CAR violations.

Student pilot certificate of Donald A. Clevenger, Sedro Woolley, Wash., revoked, for carrying a passenger and for flying within the Atomic Energy Commission prohibited area at Hanford without permission.

Commercial pilot certificate of Gaylord S. Mahan, Lynwood, Calif., revoked, for performing acrobatic maneuvers at low altitude above Bellflower Airport, Bellflower, Calif., and for failure to follow the airport's traffic pattern.

Commercial pilot certificate of William Penn Tidmore, Pottsville, Pa., revoked, for operating an aircraft which did not carry registration and airworthiness certificates, and for misrepresenting his military rating in obtaining a pilot certificate.

Safety Orders

S-289 revokes private pilot certificate of Donald Creigh Buck, for carrying a passenger while he held only a student pilot certificate (Nov. 10).

S-290 modifies the order contained in the initial decision of the examiner issued on August 4, 1949, in the matter of the suspension of the scheduled air carrier operating certificate No. 802 of Alaska Airlines (Nov. 10).

S-291 revokes pilot certificate of Edward J. Huxtable, Jr. (Nov. 14).

S-292 Board's order of revocation dated October 14, 1949, stayed to authorize E. A. Conner, d. b. a., Conner Airlines, to carry cargo (Nov. 16).

S-293 amends order serial No. S-290, relating to Alaska Airlines, Inc. (Nov. 18).

S-294 suspends for 32 days from December 19, 1949, airline transport pilot certificate of James A. Graner, for executing acrobatics at an altitude of less than 1,500 feet (Dec. 8).

Airline Orders

E-3456 orders that the application of Nationwide Airlines be assigned for public hearing before an examiner of the Board and grants certain parties leave to intervene (Oct. 19).

E-3457 approves agreements between Inland Air Lines and certain other parties relating to pick-up and delivery service at given points (Oct. 19).

E-3458 dismisses application of Keeshin Air Freight for a certificate under § 401 of the Act (Oct. 19).

E-3459 denies petition of the Flying Tiger Line requesting that certain portions of agreement No. 3541 between the carrier and Trans National Airlines be withheld from public disclosure and orders that the agreement be made a public record (Oct. 20).

E-3460 notifies U. S. Airlines that it may not serve Orlando, Fla., through the use of DeLand Municipal Airport, DeLand, Fla., until the Board finds that the public interest will not be adversely affected thereby (Oct. 20).

E-3461 amends temporary certificate issued to Trans-Texas Airways for route No. 82 (Oct. 20).

E-3462 dismisses proceeding of investigation and suspension in the matter of the fares, rules, and regulations proposed by Northwest Airlines (Oct. 20).

E-3468 amends order serial No. E-1437, dated April 23, 1948, so as to extend the period of divestiture by Atlas Corporation of its Northeast Airlines holdings (Oct. 21).

E-3464 orders investigation of, and suspends for 90 days, a certain tariff rule proposed by Eastern Air Lines (Oct. 21).

E-3465 amends order serial No. E-3057, dated July 22, 1949, so as to extend to October 21, 1950, temporary exemption granted to Wisconsin Central Airlines, authorizing the carrier to suspend service temporarily at Racine-Kenosha, Wis. (Oct. 21).

E-3466 denies petition of Island Air Ferries for reconsideration of order serial No. E-3242, which grants Air Commuting, Inc., leave to intervene in the *Service in New England States* case (Oct. 21).

E-3467 grants Capital Airlines temporary exemption from the provisions of § 401 (a) of the Act, so as to permit the carrier to serve Baltimore and omit service to Pittsburgh on its C-51 all-cargo flights which serve New York-Newark and points on route No. 14 west of Baltimore (Oct. 24).

E-3468 approves interlocking relationships existing as a result of the holding of certain positions by Sherman M. Fairchild in Pan American Airways, Inc., and Fairchild Engine and Airplane Corp. (Oct. 21).

E-3469 orders Trans American Airways, Great Lakes Airlines, and Golden Airways to show cause why the Board should not revoke their letters of registration for knowing and willful violation of the Act, and orders Edward Ware Tabor and Sky Coach Air-travel to show cause why they should not be ordered to cease and desist from engaging in air transportation (Oct. 25).

E-3470 grants Pan American permission to serve Nice, France, through the use of Le Var Airport, on or about November 1, 1949 (Oct. 25).

E-3471 grants Central Airlines permission to serve certain points on route No. 81 through the use of certain airports, on or about November 1, 1949 (Oct. 25).

E-3472 authorizes change in service pattern for Monarch Air Lines on its route No. 73 (Oct. 25).

E-3473 authorizes Turner Airlines to suspend service temporarily at Logansport, Ind., for a period of 1 year, or until adequate airport facilities are available (Oct. 25).

E-3474 grants United temporary exemption from the provisions of § 401 (a) of the Act, so as to permit the carrier to serve Hartford, Conn., and/or Boston, Mass., and New York, N. Y., and Newark, N. J., carrying property and mail only (Oct. 26).

E-3475 grants American Airlines temporary exemption from the provisions of § 401 (a) of the Act, so as to permit the carrier to serve San Francisco and Los Angeles, carrying property and mail only (Oct. 26).

E-3476 grants the Flying Tiger Line permission to serve certain points through the use of certain airports on its route No. 100, on or about November 1, 1949 (Oct. 26).

E-3477 approves agreement between Capital and certain carriers relating to porter service (Oct. 26).

E-3478 approves agreement between United and Plains Airways, relating to lease of hangar and space adjacent thereto (Oct. 26).

E-3479 approves agreement between United and British Commonwealth Pacific Airlines, relating to lease of hangar space (Oct. 26).

E-3480 approves agreement between United and Philippine Air Lines, relating to rental of building (Oct. 26).

E-3481 approves agreement between American Airlines and Central Air Transport Corp., relating to ground and flight training of Central's pilot personnel (Oct. 26).

E-3482 approves agreement between Slick Airways and Southern Air Transport, relating to furnishing of certain aircraft service by Slick (Oct. 26).

E-3483 approves agreement between Monarch Air Lines and New Mexico Airport Corp. (TWA), relating to line maintenance, cleaning, and overnight storage of one DC-3 aircraft (Oct. 26).

E-3484 approves agreement between United and certain carriers, relating to pick-up and delivery service, subject to certain provisions (Oct. 26).

E-3485 approves agreements between Braniff Airways and certain carriers, relating to pick-up and delivery service, subject to certain provisions (Oct. 26).

E-3486 approves agreements between American Airlines and certain carriers, relating to pick-up and delivery service (Oct. 26).

E-3487 opinion and order issue a foreign air carrier permit to Canadian Pacific Air Lines, for certain Canada-Honolulu-Australia service (Oct. 17).

E-3488 opinion and order issue an amended certificate to Chicago and Southern Air Lines for its route No. 8 (Oct. 27).

E-3489 denies motion and petition of Braniff Airways in the matter of the application of Pan American for amendment of its certificate with respect to transportation between the United States and various points in Latin America (Oct. 27).

E-3490 approves interlocking relationship existing as a result of the holding of certain positions by Herman Valdemar Von Holt, in Oahu Railway and Land Co. and Hawaiian Airlines (Oct. 28).

E-3491 grants TWA authority to suspend service temporarily at Grand Canyon, Ariz. (Oct. 28).

E-3492 grants Western Air Lines leave to intervene in the *Arizona-Monarch Merger* case (Oct. 28).

E-3493 approves agreement between Chicago and Southern Air Lines and Fast Delivery and John W. Reese, relating to pick-up and delivery service (Oct. 28).

E-3494 orders investigation of, and suspends for 90 days, certain fares, rules, and regulations proposed by Eastern and National (Oct. 28).

E-3495 grants Trans-Texas Airways permission to serve Carrizo Springs-Crystal City, Tex., on route No. 82, through the use of Dimmit County Airport, on or about November 1, 1949 (Oct. 31).

E-3496 grants Eastern, National, and Pan American leave to intervene in the matter of the application of Trans-Canada Air Lines for a foreign air carrier permit (Oct. 31).

Civil Aviation Highlights

	1949	1948
Airports recorded with CAA, December 1.		
By type:		
Commercial	2,610	3,000
Municipal	2,175	2,044
CAA Intermediate	139	162
Military	361	397
All others	1,174	803
Civil airports by class:		
Total	6,009	6,009
Class I and under	4,035	4,007
Class II	992	967
Class III	492	467
Class IV	369	361
Class V	133	132
Class VI and over	77	75
Total U. S. civil aircraft, December 1	92,628	96,390
Scheduled air carrier aircraft, December 1	1,083	1,070
Civil aircraft production, October		
Total	228	502
1- and 2-place models	49	156
3-, 4- and 5-place models	167	320
Over 5-place models	12	26
Certificates approved, October		
Student pilots	4,346	4,306
Private pilots	2,481	5,413
Commercial pilots	551	619
Airline transport pilots	97	98
Mechanics (original certificates)	465	721
Ground instructors (original certificates)	130	130
Flight instructor ratings	165	264
Instrument ratings	125	127
Control tower operators	122	140
Traffic control activity, October		
Aircraft operations, CAA airport towers	1,400,015	1,475,243
(Fix postings, CAA airport centers)	933,947	858,427
Instrument approaches, CAA approach control towers	23,085	14,954
Airport Operations		
Washington National, November		
Scheduled air carrier:		
Passengers departing	53,298	45,408
Passengers arriving	51,401	46,121
Aircraft arrivals and departures	9,654	9,805
Other aircraft arrivals and departures	2,698	3,971
San Francisco Municipal, October		
Scheduled air carrier:		
Passengers departing	49,457	38,289
Passengers arriving	50,226	40,863
Aircraft arrivals and departures	6,665	6,871
Other aircraft arrivals and departures	4,215	4,798
Oakland Municipal, October		
Scheduled air carrier:		
Passengers departing	3,902	6,126
Passengers arriving	3,818	5,065
Aircraft arrivals and departures	4,580	4,054
Other aircraft arrivals and departures	13,127	15,030
Miami International, October		
Scheduled air carrier:		
Passengers departing	34,892	35,837
Passengers arriving	35,064	35,529
Aircraft arrivals and departures	7,685	7,061
Other aircraft arrivals and departures	8,957	8,794

1 Airport type definitions: Commercial—Public use and public services, privately owned and operated. Municipal—Public use and public services, municipally owned and/or operated. CAA Intermediate—Public emergency use, no services, CAA operated. Military—Public restricted, military operated. All others—(a) Public emergency use only, no public services, privately owned for personal use; (b) Public emergency use only, no public services, Government-owned Forest Service, etc.

E-3497 orders that Western Air Lines be granted an extension of maturity and a revision of repayment requirements on a loan from the Reconstruction Finance Corporation (Oct. 31).

E-3498 amends order serial No. E-3241, dated September 2, 1949, so as to extend the date set for hearing in the matter of the disapproval of an agreement between Pan American-Grace Airways and certain other carriers, relating to operations within the Republic of Peru (Oct. 31).

E-3499 fixes a temporary mail rate for Wisconsin Central Airlines over its entire system (Oct. 31).

E-3500 approves agreement between Continental and Monarch, relating to use of Continental's classroom in hangar 6, Denver, Colo. (Nov. 1).

E-3501 approves agreement, subject to certain provisions, between Braniff Airways and Servicios Aereos Cruzeiro do Sul Ltda, relating to furnishing certain services to Braniff (Nov. 1).

E-3502 approves agreement between Braniff, American, Continental, Eastern, and Trans-Texas Airways, relating to establishment, operation, and maintenance of a joint airlines office at Lackland Army air base (Nov. 1).

E-3503 approves agreement between American Overseas Airlines and Philippine Air Lines, relating to ground facilities and service at the Municipal Airport, London (Nov. 1).

E-3504 approves agreement between TWA and Compania Austral de Navegacion Aerea, relating to servicing and repair of 11 Lockheed Lodestar aircraft (Nov. 1).

E-3505 approves agreement between TWA and Caribbean-Atlantic Airlines, relating to interline traffic agreement (Nov. 1).

Scheduled Air Carrier Operations

(Source: CAB Form 41)

International and Overseas: January-October 1948, 1949

Operator	Revenue miles		Revenue passengers		Revenue passenger-miles (000)		Passenger seat-miles (000)		Revenue passenger load factor (percent)	
	January-September		January-September		January-September		January-September		January-September	
	1949	1948	1949	1948	1949	1948	1949	1948	1949	1948
American Airlines	1,660,163	1,751,727	62,684	50,901	50,387	37,000	78,330	66,798	64.33	55.39
American Overseas Airlines	5,961,806	5,725,604	67,264	56,015	137,912	131,092	227,710	216,180	60.56	60.64
Braniff Airways	1,162,313	337,881	9,648	2,226	20,443	3,842	53,554	16,607	38.17	23.13
Chicago & Southern Air Lines	1,268,942	488,631	17,953	10,460	20,903	8,078	61,009	22,997	34.26	35.13
Colonial Airlines	529,855	512,820	10,503	13,737	8,263	10,802	23,290	22,347	35.48	48.34
Eastern Air Lines	561,600	563,836	11,530	12,961	12,418	13,473	28,147	31,418	44.12	42.88
National Airlines	494,810	295,491	45,692	19,803	13,027	6,067	24,350	14,531	53.50	41.75
Northwest Airlines	4,347,658	3,131,592	29,003	20,737	57,960	41,409	103,784	75,204	55.85	55.06
Pan American Airways:										
Atlantic Division	11,881,162	9,841,571	100,682	89,621	243,901	215,723	393,275	329,842	62.02	65.40
Latin American Division	21,934,213	21,456,677	555,783	524,167	459,192	416,008	803,761	792,828	57.13	52.47
Alaska Operations	1,998,787	1,905,547	29,587	27,609	28,721	27,018	56,060	65,075	51.23	42.83
Pacific Operations	11,093,392	11,558,421	66,331	66,006	191,176	199,224	293,585	288,232	65.12	69.12
Pan American-Grace Airways	4,306,348	4,238,317	69,170	69,939	79,200	77,487	147,566	132,435	53.67	58.51
Transcontinental & Western Air	10,484,867	9,276,895	78,193	59,426	221,999	184,759	351,826	324,541	63.10	56.93
United Air Lines	1,793,785	1,408,800	22,278	16,581	53,031	39,815	76,622	56,235	69.21	70.80
Uruba, Medellin & Central Airways	77,372	112,264	2,265	1,694	752	563	1,231	1,810	61.09	31.10
Total	79,457,073	72,606,074	1,178,566	1,041,883	1,599,285	1,412,360	2,724,100	2,455,080	58.71	57.53
Index (1948=100)	109.44	100.00	113.12	100.00	113.23	100.00	110.96	100.00	102.05	100.00

Operator	Ton-miles flown							
	Express		Freight		U. S. mail		Parcel post	
	January-September		January-September		January-September		January-September	
	1949	1948	1949	1948	1949	1948	1949	1948
American Airlines	0	0	885,433	1,091,254	95,483	63,202	0	0
American Overseas Airlines	2,819,961	1,880,526	0	0	864,937	968,796	255,706	93,471
Braniff Airways	0	0	152,265	18,947	13,322	3,740	0	0
Chicago & Southern Air Lines	0	0	215,387	85,312	9,279	2,095	821	25
Colonial Airlines	0	0	45,263	47,717	6,230	6,202	1,021	354
Eastern Air Lines	0	0	325,907	305,835	42,857	30,796	5,738	29
National Airlines	202,948	150,334	0	0	9,945	8,750	0	0
Northwest Airlines	78,458	42,367	3,253,869	953,830	1,398,031	978,209	0	0
Pan American Airways:								
Atlantic Division	6,362,398	3,797,495	0	0	1,742,507	1,825,533	287,651	97,558
Latin American Division	13,387,768	13,044,618	0	0	1,969,001	1,943,383	0	0
Alaska Operations	3,079,810	2,199,491	0	0	316,331	292,081	0	0
Pacific Operations	4,589,838	2,821,714	0	0	3,900,854	2,703,819	0	0
Pan American-Grace Airways	1,124,786	1,156,017	231,842	53,766	237,387	214,805	18,579	0
Transcontinental & Western Air	4,601,116	2,874,582	0	0	1,821,895	1,731,281	341,277	172,083
United Air Lines	212,266	101,224	0	0	531,250	273,255	0	0
Uruba, Medellin & Central Airways	29,705	32,383	0	0	0	0	0	0
Total	36,488,856	28,100,751	5,109,966	2,556,661	12,959,309	11,045,947	910,790	363,520
Index (1948=100)	129.85	100.00	199.87	100.00	117.32	100.00	250.55	100.00

International and Overseas: September 1949

Operator	Revenue miles	Revenue passengers	Revenue passenger-miles (000)	Passenger seat-miles (000)	Revenue passenger load factor (percent)	Ton-miles flown			
						Express	Freight	U. S. Mail	Parcel post
American Airlines	177,620	7,539	5,729	8,899	64.38	0	80,723	8,749	0
American Overseas Airlines	750,940	9,834	18,111	30,595	59.20	243,778	0	69,393	25,423
Braniff Airways	144,551	1,233	2,915	6,781	42.99	0	13,799	1,061	0
Chicago & Southern Air Lines	179,456	933	2,594	8,281	31.32	0	23,152	1,424	188
Colonial Airlines	47,456	933	726	2,088	34.77	0	549	672	115
Eastern Air Lines	62,400	1,579	1,642	3,058	53.70	0	21,281	5,753	245
National Airlines	60,428	5,600	1,583	3,059	51.75	17,016	0	1,186	0
Northwest Airlines	465,580	3,509	7,221	10,688	67.56	8,927	407,172	137,792	0
Pan American Airways:									
Atlantic Division	1,606,657	12,990	34,156	58,437	58.45	705,415	0	177,847	41,265
Latin American Division	2,318,785	57,430	52,171	86,488	60.32	1,452,426	0	206,773	0
Alaska Operations	226,807	4,753	4,118	7,242	56.86	422,186	0	36,477	0
Pacific Operations	1,154,655	7,905	23,030	35,075	65.66	742,457	0	404,157	0
Pan American-Grace Airways	451,913	7,522	8,565	16,974	50.46	116,114	0	21,985	2,445
Transcontinental & Western Air	1,339,387	10,532	30,342	45,912	66.09	448,317	0	174,685	32,681
United Air Lines	206,400	2,568	6,163	9,002	68.46	42,162	0	51,602	0
Uruba, Medellin & Central Airways	8,632	249	83	132	62.88	3,369	0	0	0
Total	9,201,667	135,894	199,149	332,711	59.86	4,202,167	546,676	1,299,556	102,362

Domestic: Passenger-miles flown (total revenue and non-revenue in thousands)

	January	February	March	April	May	June	July	August	September	October	Total
Trunk	436,938	440,903	541,986	585,751	616,776	689,168	650,014	638,356	643,866	621,027	5,864,785
Feeder	6,714	7,545	9,821	11,529	12,771	14,415	15,619	16,234	15,395	13,694	123,737
Territorial	4,326	3,709	3,794	4,404	3,987	4,155	4,934	5,029	3,429	3,022	40,789
Total	447,978	452,157	555,601	601,684	633,534	707,738	670,567	659,619	662,690	637,743	6,029,311

CAA Tabulation Shows 35,001 Flight Instructors

On May 1, 1949, there were 35,001 certificated flight instructors on record with the Civil Aeronautics Administration. The previous count as of April 1, 1948, showed 29,365 persons held flight instructor ratings.

A state-by-state tabulation of flight instructors and CAA-approved flight and ground schools as of May 1949 follows:

Certificated Flight Instructors and CAA-Approved Schools as of May 1, 1949

State	Flight instructors	CAA-approved schools			
		Total	Flight and ground	Flight only	Ground only
Alabama	351	52	0	51	1
Arizona	435	41	14	27	0
Arkansas	520	54	37	16	1
California	4,302	231	131	61	39
Colorado	525	45	24	20	1
Connecticut	368	26	23	3	0
Delaware	62	9	1	8	0
District of Columbia	170	1	0	0	1
Florida	1,472	121	89	27	5
Georgia	550	51	42	9	0
Idaho	346	36	2	32	2
Illinois	1,629	28	8	18	2
Indiana	871	30	4	24	2
Iowa	625	89	4	84	1
Kansas	802	115	0	113	2
Kentucky	284	13	2	11	0
Louisiana	484	33	1	30	2
Maine	210	27	17	10	0
Maryland	279	25	6	18	1
Massachusetts	843	69	26	42	1
Michigan	1,248	63	9	47	7
Minnesota	821	22	1	20	1
Mississippi	241	32	25	7	0
Missouri	931	78	27	46	5
Montana	353	2	1	1	0
Nebraska	429	78	2	72	4
Nevada	122	12	2	10	0
New Hampshire	149	18	0	0	0
New Jersey	663	66	28	38	0
New Mexico	222	3	1	2	0
New York	2,165	127	77	38	12
North Carolina	536	68	58	8	2
North Dakota	175	40	1	39	0
Ohio	1,503	83	5	77	1
Oklahoma	860	78	14	64	0
Oregon	623	64	10	52	2
Pennsylvania	1,550	173	18	152	3
Rhode Island	104	10	5	5	0
South Carolina	315	36	19	17	0
South Dakota	169	42	25	16	1
Tennessee	591	39	5	33	1
Texas	2,907	230	150	55	25
Utah	208	12	1	11	0
Vermont	103	12	7	5	0
Virginia	276	71	2	69	0
Washington	1,205	108	57	40	11
West Virginia	260	34	0	34	0
Wisconsin	596	39	5	34	0
Wyoming	124	28	0	28	0
Outside U. S. A.	324	10	3	7	0
Grand total	35,001	2,774	1,007	1,631	136

Southwest Extension Authorized

The Civil Aeronautics Board on December 19 issued an additional supplemental opinion to the so-called California-Nevada Service case, dealing with the local air service pattern in the area southeast of Los Angeles as far as Phoenix, Ariz. The Board authorized Southwest Airways Co., a feeder air carrier operating in Oregon and California, to carry persons, property and mail between the coterminal points Los Angeles, Burbank, and Long Beach, Calif., via the intermediate points Santa Ana-Laguna Beach, Ocean-side, San Diego, El Centro, Calif., and Yuma and Ajo, Ariz., and the terminal point Phoenix, subject to certain conditions.

Powerplant Handbook Is Available

"Aircraft Powerplant Handbook" is a Civil Aeronautics Administration publication intended specifically for use by students, mechanics, pilots, and engineers who have only superficial knowledge of aircraft powerplant fundamentals. It is on sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for \$1.25 a copy.

Scheduled Air Carrier Operations Domestic: January-October 1949, 1948

Operator	Revenue miles		Revenue passengers		Revenue passenger-miles (000)		Passenger seat-miles (000)	
	January-October		January-October		January-October		January-October	
	1949	1948	1949	1948	1949	1948	1949	1948
Trunk Lines								
American Airlines	46,704,164	46,588,156	2,758,942	2,333,182	1,285,733	1,081,730	1,944,827	1,797,340
Braniff Airways	9,565,394	9,132,786	499,732	470,450	166,429	161,616	314,131	293,817
Capital Airlines	17,019,884	14,513,776	1,016,880	864,159	298,457	229,586	578,107	464,976
Chicago & Southern Air Lines	6,336,063	5,862,788	265,805	234,405	91,630	88,693	169,350	154,907
Colonial Airlines	3,440,269	2,541,936	167,833	120,492	43,881	33,329	72,321	53,002
Continental Air Lines	4,780,378	4,676,801	152,421	136,411	55,478	49,688	132,728	96,351
Delta Air Lines	10,811,525	10,821,515	445,666	406,330	176,708	152,512	314,820	290,665
Eastern Air Lines	44,200,867	40,991,117	1,877,373	1,683,245	844,335	820,407	1,486,817	1,365,194
Inland Air Lines	2,285,052	1,923,378	71,984	62,097	26,623	22,790	45,239	37,918
Mid-Continent Airlines	7,118,924	6,664,783	286,411	264,225	84,453	78,554	149,498	133,659
National Airlines	8,241,990	4,442,766	248,985	127,463	140,342	68,728	308,157	184,372
Northeast Airlines	3,361,682	2,861,862	282,963	235,984	53,913	45,183	107,450	93,677
Northwest Airlines	13,835,589	14,138,289	619,921	531,982	353,147	281,903	603,681	482,189
Transcontinental & Western Air	42,173,638	45,410,863	1,193,390	1,037,163	803,207	716,592	1,306,541	1,210,687
United Air Lines	44,127,507	48,830,942	1,882,174	1,640,785	1,097,163	985,695	1,569,412	1,480,444
Western Air Lines	5,187,823	5,263,964	229,494	231,735	86,744	90,775	176,970	161,936
Trunk total	271,189,949	264,665,722	11,999,974	10,380,108	5,608,243	4,907,781	9,280,299	8,301,134
Index (1948=100)	102.47	100.00	115.61	100.00	114.27	100.00	111.80	100.00
Feeder Lines								
All American Airways	2,110,151	1,466,533	59,851	0	7,980	0	35,291	0
Central Airlines	78,743	179	179	0	23	0	248	0
Challenger Airlines	1,324,413	1,148,467	26,205	18,291	7,199	4,620	26,708	23,257
Empire Air Lines	886,491	830,040	28,893	18,207	6,164	3,952	18,617	15,516
Florida Airways (ceased op. 3/28/49)	193,120	683,803	3,026	10,345	409	1,391	1,542	5,401
Helicopter Air Service (8/20/49)	27,202	0	0	0	0	0	0	0
Los Angeles Airways	287,298	227,141	0	0	0	0	0	0
Mid-West Airlines (10/21/49)	18,492	34	34	0	4	0	74	0
Monarch Air Lines	1,452,872	1,371,922	26,145	24,133	6,534	5,761	26,550	24,641
Piedmont Aviation	2,481,698	1,234,642	71,177	30,685	15,270	7,204	52,117	25,951
Pioneer Air Lines	3,202,401	2,751,405	86,784	76,551	23,608	20,406	77,117	66,068
Robinson Airlines	733,707	60,708	34,589	3,095	5,180	453	14,444	1,275
Southern Airways (6/10/49)	513,160	6,852	6,852	1,122	1,122	1,136	11,336	0
Southwest Airways	2,019,561	1,953,267	99,613	80,717	18,145	14,713	43,030	42,224
Trans-Texas Airways	2,376,532	1,463,222	39,386	16,472	9,291	3,936	49,918	30,727
West Coast Airlines	1,058,526	1,043,588	38,697	60,437	7,708	7,550	22,229	20,160
Wiggins, E. W., Airways (9/19/49)	20,482	157	157	15	15	82	82	5,683
Wisconsin-Central Airlines	1,318,781	646,193	27,282	9,496	4,137	1,665	11,106	5,683
Feeder total	20,103,630	14,880,931	568,870	348,429	112,789	71,651	390,409	260,903
Index (1948=100)	135.10	100.00	163.27	100.00	157.41	100.00	149.64	100.00
Territorial Lines								
Caribbean-Atlantic Airlines	499,775	344,439	68,949	61,554	5,110	3,869	12,181	8,719
Hawaiian Airlines	2,402,296	2,742,976	257,542	292,699	35,189	41,083	52,764	60,397
Territorial total	2,902,071	3,087,415	326,491	354,253	40,299	44,952	64,945	69,116
Index (1948=100)	94.00	100.00	92.16	100.00	89.65	100.00	93.97	100.00
Grand Total	294,195,650	282,634,068	12,895,335	11,082,790	5,761,331	5,024,384	9,735,653	8,631,153
Index (1948=100)	104.09	100.00	116.35	100.00	114.67	100.00	112.80	100.00
Ton-miles flown								
Operator	Revenue passenger-load factor (percent)		Express		Freight		U. S. mail	
	January-October		January-October		January-October		January-October	
	1949	1948	1949	1948	1949	1948	1949	1948
Trunk Lines								
American Airlines	66.11	60.01	4,339,925	4,526,730	25,414,626	16,916,957	7,077,496	6,168,435
Braniff Airways	52.98	55.19	652,840	709,666	905,032	1,008,959	860,738	745,682
Capital Airlines	51.63	49.38	1,344,423	1,562,711	5,612,785	3,967,648	835,305	681,349
Chicago & Southern Air Lines	54.11	57.26	439,210	501,959	503,379	443,923	425,519	372,142
Colonial Airlines	60.68	62.88	53,007	43,189	89,777	31,119	78,940	63,218
Continental Air Lines	41.72	51.57	78,425	82,034	309,821	217,131	170,224	140,961
Delta Air Lines	56.13	52.47	564,971	700,667	1,901,415	1,372,118	709,592	515,255
Eastern Air Lines	60.09	60.09	2,759,994	3,048,228	6,722,175	4,385,826	3,909,519	3,433,007
Inland Air Lines	58.85	60.10	33,263	44,993	107,913	64,689	96,285	82,236
Mid-Continent Airlines	56.49	58.77	172,752	159,459	280,411	227,592	255,207	234,211
National Airlines	45.54	37.28	403,583	464,479	923,380	552,236	436,145	231,101
Northeast Airlines	50.17	48.23	71,466	81,107	194,854	152,349	71,361	56,579
Northwest Airlines	58.50	58.46	1,330,464	1,425,272	3,635,032	1,849,340	1,979,309	1,708,827
Transcontinental & Western Air	61.48	59.19	3,902,628	4,794,222	9,778,700	7,805,994	7,198,385	6,964,244
United Air Lines	69.91	66.58	4,976,781	5,839,359	19,135,146	15,854,553	8,204,140	7,087,380
Western Air Lines	49.02	56.06	235,435	250,316	341,139	328,419	304,016	367,541
Trunk total	60.43	59.12	21,378,267	24,234,391	75,255,576	55,378,853	32,612,181	29,052,168
Index (1948=100)	102.22	100.00	88.21	100.00	135.89	100.00	112.25	100.00
Feeder Lines								
All American Airways	22.61	0	45,640	28,418	0	0	33,297	32,724
Central Airlines	9.43	0	0	0	0	0	628	0
Challenger Airlines	26.95	19.86	27,716	16,996	61,921	34,191	31,314	25,639
Empire Air Lines	33.11	25.47	12,362	9,956	0	0	16,760	17,461
Florida Airways (ceased op. 3/28/49)	26.52	25.75	660	3,200	0	0	1,812	6,206
Helicopter Air Service (8/20/49)	0	0	0	0	0	0	1,770	0
Los Angeles Airways	0	0	0	0	0	0	35,353	21,345
Mid-West Airlines (10/21/49)	5.41	1	1	0	0	0	237	0
Monarch Air Lines	24.61	23.38	16,940	12,761	73,695	71,563	20,944	21,274
Piedmont Aviation	29.30	27.76	30,775	13,320	49,180	10,869	24,768	13,784
Pioneer Air Lines	30.61	30.89	24,509	16,434	59,059	29,484	67,226	52,743
Robinson Airlines	35.86	35.53	301	0	13,370	1,244	14,454	1,394
Southern Airways (6/10/49)	9.56	9.670	0	0	0	0	8,968	0
Southwest Airways	42.17	34.85	28,048	25,344	73,742	59,733	40,133	

Proposal Would Permit Minor Repairs by Pilots

A change in the Civil Air Regulations to authorize a certificated pilot to perform preventive maintenance on aircraft he owns or operates is one of several CAR changes proposed by the Bureau of Safety Regulation of the Civil Aeronautics Board in a draft release dated December 9.

The draft release gives revisions of Parts 18, 24, 52, and 53 the Bureau has under consideration. Interested persons were invited to submit comments on the proposals not later than February 1, 1950.

In connection with the proposed revision of Part 18, the release states:

"The proposed revision restates and clarifies the standards for the performance of maintenance, repairs, and alterations of any certificated aircraft, or any component thereof. This proposal also sets forth the classifications of persons authorized to perform and to approve maintenance, repair, and alteration operations, and describes the required maintenance, repair, and alteration records.

"It will be noted that we are proposing several substantive changes. One such change, dictated by the requirements of § 610 (a) (3) of the Act, would require a manufacturer to secure a repair station certificate with appropriate ratings and to employ certificated airmen in order to perform maintenance, overhaul, or repair functions . . ."

Important Change Proposed.—"Another important change is that we are proposing to authorize a certificated pilot to perform preventive maintenance on aircraft owned or operated by him. 'Preventive maintenance' is defined in this proposal to mean simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations. It is anticipated that the Administration will publish, as part of Civil Aeronautics Manual 18, the various operations constituting preventive maintenance of the several types of aircraft.

"We are also proposing to require that an aircraft be flight tested only after it has undergone major repair or major alteration operations, thus eliminating the requirement that an aircraft be test flown after it has undergone maintenance, minor repair, or minor alteration operations. Further, we propose to permit a certificated pilot, appropriately rated for the aircraft to be test flown, to make such test flight in lieu of the current requirement that such pilot have at least 200 hours of flight time as pilot. We do not believe that either of these provisions will result in a lowering of the performance standards by those accomplishing such operations."

Part 24 Proposal Explained.—Regarding the proposed revision of Part 24, the Bureau said:

"The proposed revision establishes requirements for the issuance of mechanic certificates and ratings for all mechanics, delineates the privileges of such certificates, and establishes basic operating rules for the holders thereof. It is not proposed to require certificated mechanics to submit any periodic activity report or to authorize such individuals to pack parachutes.

"The most important change proposed concerns the ratings to be issued. This proposal provides for the issuance of the following ratings: airframe, powerplant, propeller, radio, instrument (mechanical, electrical, and gyroscopic), and accessory (mechanical and electrical). The last three ratings (radio, instrument, and accessory) are designed to supplant the limited mechanic certificates currently authorized by Special Civil Air Regulations SR-332. This proposal also establishes appropriate knowledge, experience, and skill requirements for each of the above-mentioned ratings.

"With respect to airframe, powerplant, and propeller ratings it is proposed that each applicant will be

Scheduled Air Carrier Operations

(Continued from page 9)

Domestic: October 1949

Operator	Revenue miles	Revenue passengers	Revenue passenger miles (000)	Passenger seat-miles (000)	Revenue passenger load fac- tor (per- cent)	Ton-Miles Flown		
						Express	Freight	U. S. Mail
Trunk Lines								
American Airlines.....	5,066,909	311,040	142,612	213,170	66.90	548,062	3,112,050	712,380
Braniff Airways.....	977,192	54,960	18,157	32,050	56.65	75,545	116,249	88,949
Capital Airlines.....	1,840,018	110,473	32,349	65,773	49.18	195,531	723,279	95,748
Chicago & Southern Air Lines.....	678,782	29,022	10,445	18,538	56.34	49,799	65,902	43,212
Colonial Airlines.....	359,257	16,930	4,486	7,591	59.10	7,384	10,361	8,616
Continental Air Lines.....	467,541	15,928	5,851	13,557	43.16	7,380	40,758	14,359
Delta Air Lines.....	1,088,495	46,545	17,072	32,539	52.47	65,627	194,808	67,614
Eastern Air Lines.....	4,429,626	194,045	81,561	149,967	54.39	297,216	738,014	383,347
Inland Air Lines.....	233,263	7,336	2,690	4,533	59.34	5,106	9,794	8,284
Mid-Continent Airlines.....	768,472	31,413	9,011	16,138	55.84	22,991	31,471	26,221
National Airlines.....	851,178	24,448	13,207	29,286	45.10	51,347	128,099	31,794
Northeast Airlines.....	334,765	25,524	4,859	10,466	46.43	9,551	25,167	7,203
Northwest Airlines.....	1,854,394	71,647	43,190	80,074	53.94	152,191	420,796	215,162
Transcontinental & Western Air.....	4,016,174	126,624	84,568	126,486	66.86	470,559	1,267,784	676,082
United Air Lines.....	4,606,683	197,670	115,047	166,226	69.63	621,093	2,259,143	820,944
Western Air Lines.....	543,189	22,049	8,297	18,980	43.71	37,580	30,396	45,713
Trunk total.....	28,116,238	1,285,654	593,402	981,371	60.28	2,616,962	9,174,073	3,218,178
Feeder Lines								
All American Airways.....	236,805	8,205	1,153	4,973	23.19	7,586	0	2,411
Central Airlines (9/15/49).....	62,564	123	17	200	8.50	0	0	193
Challenger Airlines.....	94,824	1,730	508	1,896	26.79	3,027	7,398	2,420
Empire Air Lines.....	92,577	2,887	633	1,944	32.56	1,968	0	1,662
Helicopter Air Service (8/20/49).....	15,109	0	0	0	—	0	0	849
Los Angeles Airways.....	29,695	0	0	0	—	0	0	3,469
Mid-West Airlines (10/21/49).....	18,492	34	1	74	5.41	1	0	237
Monarch Air Lines.....	148,809	2,684	645	2,678	24.09	1,924	8,799	2,067
Piedmont Aviation.....	291,520	8,793	1,843	6,122	30.10	4,335	7,389	2,535
Pioneer Air Lines.....	329,745	10,095	2,658	7,913	33.46	3,186	8,792	7,160
Robinson Airlines.....	90,678	4,455	674	1,774	37.99	301	1,633	1,681
Southern Airways.....	159,128	2,109	343	3,800	9.03	3,178	0	3,104
Southwest Airways.....	205,945	9,821	1,778	4,330	41.06	3,023	7,247	4,084
Trans-Texas Airways.....	278,385	5,126	1,177	5,858	20.09	2,129	4,625	4,649
West Coast Airlines.....	96,253	4,093	554	2,021	27.41	681	0	695
Wiggins, E. W., Airways (9/19/49).....	15,420	118	12	62	19.35	0	0	117
Wisconsin-Central Airlines.....	172,445	3,202	479	1,405	34.02	2,347	0	1,976
Feeder total.....	2,338,394	63,475	12,478	45,080	27.68	33,686	45,683	39,609
Territorial Lines								
Caribbean-Atlantic Airlines.....	44,620	4,039	331	1,082	30.59	0	1,663	588
Hawaiian Airlines.....	233,057	20,237	2,628	5,084	51.69	9,946	52,565	4,597
Territorial total.....	277,677	24,276	2,959	6,166	47.99	9,946	54,228	5,185
Grand total.....	30,732,309	1,373,405	608,839	1,035,620	58.79	2,660,594	9,273,984	3,292,972

given by the Administrator an appropriate written and oral knowledge examination. However, with respect to radio, instrument, and accessory ratings, it is proposed to authorize the Administrator to prescribe either a written or oral knowledge examination. In every instance, it is proposed to require an applicant to take a practical examination appropriate to the rating sought. It is intended that these examinations be designed to permit an applicant to demonstrate that he possesses a well-rounded, basic knowledge of the work which the rating applied for authorizes him to perform. It is believed that all examinations serving to qualify an individual for a mechanic certificate should be conducted by the Administrator to insure that all applicants meet the same general standards.

"We believe that current holders of mechanic certificates and limited mechanic certificates will, in most instances, be able to meet the proposed certificate requirements, and we have, therefore, provided that these individuals may exchange such certificates for certificates issued in accordance with this part."

New Provisions Suggested.—In connection with the proposed revision of Part 52, the Bureau said:

"The most important innovations in the proposed revision are provisions for the issuance of repair station ratings for radio, instruments, and accessories, and for the issuance of ratings limited to the performance of specialized services. Under the terms of the proposed revision the following general ratings may be issued to repair stations: airframe, powerplant, propeller, radio, instrument, and accessory. In addition

to these general ratings, a limited rating may be issued authorizing an applicant to work on some particular type of airframe, powerplant, etc., or to perform some specialized maintenance, repair, or overhaul function. Thus, an applicant may, if he so desires, apply only for the rating for which he is able to furnish the required facilities, equipment, materials, and personnel. An applicant for a powerplant rating would not, for example, have to be equipped to repair all powerplants, but may choose the horsepower limits within which he desires to work.

"All applicants would be required to furnish housing, facilities, equipment, materials, and personnel adequate to perform competently the work authorized by the particular rating sought. The exact type and amount of such housing, facilities, equipment, materials, and personnel, will, in all probability, vary in each instance. This proposal sets forth the main functions to be performed by a repair station holding a particular rating. It is believed that these functions are stated in such terms as to permit the applicant and a CAA examining agent to determine jointly the facilities and equipment required to be furnished for a particular rating without resort, as under current regulations, to a detailed mandatory list of facilities and equipment. This provision also is designed to provide applicants with an incentive to provide more efficient methods of accomplishing the required functions."

In connection with the proposed revision of Part 53, the Bureau said:

(Continued on next page)

CAB Accident Reports

Acrobatics Caused Crash.—Reckless conduct of a Navy pilot in performing acrobatic maneuvers on a civil airways was given by the Civil Aeronautics Board as the probable cause of an accident July 30, 1949, in which an Eastern Air Lines' plane and a Navy fighter collided with a loss of 16 lives. The accident occurred on Red Airway 3, near Chesterfield, N. J.

The airliner was en route from La Guardia Field to Wilmington, Del., having originated at Boston, with Memphis, Tenn., as the destination. The Navy fighter, piloted by Lt. (jg) Robert V. Poe, was en route from the Naval Air Station, Anacostia, D. C., to the Naval Air Station, Quonset Point, R. I., on a training flight.

Weather conditions were good. The visibility was 10 miles or better.

Shortly before the accident, the fighter was observed to perform acrobatics and to "buzz" a small civil aircraft in the neighborhood of Chesterfield. The pilot of this aircraft reported that while he was in level flight at an altitude of about 1,000 feet, the fighter passed an estimated 100 feet directly in front of him and headed vertically upwards.

The private pilot then lost sight of the fighter as it passed up and in back of him. A few seconds later he saw it again starting up from below and to his rear. It continued up again in front of the private plane, although not as close as previously. This maneuver continued until the fighter and the airliner collided at an altitude of about 2,000 feet. According to the testimony of this pilot and ground witnesses, neither the airliner nor the fighter made any evasive maneuver and, the Board said, "it may be concluded that neither pilot saw the other aircraft in time to avert a collision."

Upon collision the fighter plane lost its left wing and the airliner lost the outer portion of its left wing. Both aircraft then fell in erratic paths, losing various parts while falling. The airliner burned when it struck the ground. All 15 occupants were killed. The fighter's pilot was either seriously injured or killed at the time of the impact and was thrown clear of the aircraft during the descent. There was no indication that he attempted to use his parachute.

"As a result of recent collision accidents," the Board said, "the Civil Aeronautics Administration, the U. S. Navy, the U. S. Air Force, the Civil Aeronautics Board, and other agencies concerned, are jointly pursuing an intensive program for the apprehension of violators of the Civil Air Regulations, particularly with reference to so-called 'buzzing' and/or reckless flying."

The Board determined that the probable cause of the accident was "the reckless conduct of the Navy pilot in performing acrobatic maneuvers on a civil airway and his failure to notice the presence of an air carrier aircraft with which he collided."

The Civil Air Regulations forbid any acrobatic flight on any airway at any altitude, the Board's accident report pointed out. "The Air Traffic Rules of the Civil Air Regulations apply to all aircraft, both civil and military," it added.

RTCA Report Available

The combined report of special committees 41 and 52 of the Radio Technical Commission for Aeronautics entitled "The Operational and Technical Characteristics of a Transition Period Air Traffic Control Communication System and a Study of Its Operation and Economic Values," has been approved by the RTCA executive committee.

The report, identified as Paper 116-49/DO-30, is dated December 15, 1949, and is available at a cost of \$1 per copy from the RTCA Secretariat, 1724 F Street, Northwest, Washington 25, D. C.

Aeronautical Industry Reports Gain in Sales

The aeronautical industry's sales for the third quarter of 1949 totaled \$459 million, an increase of \$28 million over the previous quarter and \$86 million more than in the third quarter of 1948, according to a report issued jointly by the Civil Aeronautics Administration and the Bureau of the Census, Department of Commerce. Sales for the first 9 months of 1949 were \$1,272 million, or more than \$200 million greater than in the same period of 1948. Military sales have accounted for 81 percent of the total output in 1949, sales 13 percent, and other products and services 6 percent.

The backlog for aircraft, engine and propeller companies stood at \$2,858 million on September 30, 1949. Of this amount, \$1,851 million (65 percent) represented orders for complete aircraft and parts; \$733 million (26 percent) was for aircraft engines and parts; \$101 million (4 percent) was for aircraft propellers and parts; \$173 (5 percent) represented orders for other products and services. The September 30, 1949, backlog was 9 percent less than the \$3,140 million backlog a year ago.

The complete figures on sales, backlog and new orders for the third quarter of 1949 show:

Backlog, Sales, and Net New Orders for Quarter Ending September 30, 1949 (In millions of dollars)

	Backlog beginning of quarter	Net new orders during quarter ¹	Net sales during quarter	Backlog at end of quarter
Total.....	\$2,880	\$437	\$459	\$2,858
Complete aircraft and parts.....	1,907	234	290	1,851
U. S. Military.....	1,762	207	243	1,726
Other.....	145	27	47	125
Aircraft engines and parts.....	688	171	126	733
U. S. Military.....	650	159	116	693
Other.....	38	12	10	40
Aircraft propellers and parts.....	110	6	15	101
U. S. Military.....	105	3	12	96
Other.....	5	3	3	5
Other products and services.....	175	26	28	173

¹ Net orders received during quarter less cancellations during quarter. Cancellations not shown separately to avoid disclosing figures for individual companies.

CAM Supplements and Aviation Safety Releases

Issued between October 15, 1949, and November 15, 1949, and obtainable from the Office of Aviation Information, Civil Aeronautics Administration, Department of Commerce, Washington 25, D. C.

CAM Supplements

CAM No.	Supplement No.	Title	Date
43	1	Maintenance of Engine Logs Rebuilt Engine Logs.....	9/1/49
43	2	Certificates and Identification Marks.....	11/17/49
43	3	Certificates and Identification Marks.....	11/21/49
61	4	Admission to Pilot Compartment.....	12/14/49

Aviation Safety Releases

No.	Subject	Date
330	Aircraft and Equipment Engineering Report No. 45, "Simplified Flutter Prevention Criteria for Personal Type Aircraft".....	12/2/49

Regulations of The Administrator

(Through December 30, 1949)

Note: All Regulations of the Administrator in effect on June 30, 1949, were published in the Federal Register, part II, section 2, July 16, 1949, which is on sale at 20 cents a copy by the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C. Dates on which all amendments issued subsequent to June 30, 1949, were published in the Federal Register are given in parentheses. Copies of amendments may be obtained free of charge from the Office of Aviation Information, CAA, Washington 25, D. C. Parts marked with an asterisk (*) may be obtained separately from the Superintendent of Documents at the indicated prices. Remit check or money order, made payable to the Superintendent of Documents, directly to the Government Printing Office, Washington 25, D. C.

- Part 405—Procedure of the Civil Aeronautics Administration.
- *Part 406—Rules of Practice Governing Proceedings to Alter, Amend, or Modify Certificates. (5¢.)
- *Part 407—Seizure of Aircraft. (5¢.)
- *Part 450—Inter-American Aviation Training Grants. (5¢.)
- *Part 501—Aircraft Registration Certificates. (5¢.)
- *Part 502—Dealers' Aircraft Registration Certificates. (5¢.)
- *Part 503—Recordation of Aircraft Ownership. (5¢.)
- *Part 504—Recordation of Encumbrances Against Specifically Identified Aircraft Engines. (5¢.)
- *Part 505—Recordation of Encumbrances Against Aircraft Engines, Propellers, Appliances, or Spare Parts. (5¢.)
- *Part 550—Federal Aid to Public Agencies for Development of Public Airports. (10¢.)
- Amendment 1. (Aug. 11, 1949.)
- Amendment 2. (Sept. 1, 1949.)
- Amendment 3. (Nov. 18, 1949.)
- *Part 555—Acquisition of Government-owned Lands for Public Airport Purposes. (5¢.)
- *Part 560—Reimbursement for Damage to Public Airports by Federal Agencies. (10¢.)
- Amendment 1. (Nov. 16, 1949.)
- *Part 570—Rules of Washington National Airport. (5¢.)
- Amendment 1. (Nov. 26, 1949.)
- *Part 600—Designation of Civil Airways (including amendments 1 through 18). (10¢.)
- Amendment 19. (July 28, 1949.)
- Amendment 20. (Sept. 30, 1949.)
- Amendment 21. (Oct. 15, 1949.)
- Amendment 22. (Nov. 18, 1949.)
- Amendment 23. (Dec. 2, 1949.)
- *Part 601—Designation of Control Areas, Control Zones, and Reporting Points (including amendments 1 through 22). (15¢.)
- Correction. (Nov. 17, 1949.)
- Amendment 23. (July 28, 1949.)
- Amendment 24. (Sept. 30, 1949.)
- Amendment 25. (Oct. 15, 1949.)
- Amendment 26. (Nov. 18, 1949.)
- Amendment 27. (Dec. 2, 1949.)
- Part 625—Notice of Construction or Alteration.
- Part 635—Reproduction and Dissemination of Current Examination Materials.

CAR Revisions Proposed

(Continued from page 10)

"This proposal, in addition to establishing requirements for the issuance of mechanic school certificates and ratings and basic operating rules for the holders thereof, authorizes the issuance of new ratings and establishes curricula for such ratings.

"It is proposed to issue the following mechanic school ratings: airframe, powerplant, propeller, radio, instrument, and accessory. It will be noted that these ratings parallel those proposed to be issued to mechanics and to repair stations, thus providing continuity throughout these related fields. (See proposed revisions of Parts 24 and 52 published concurrently herewith.) For each of these ratings it is proposed to establish a curriculum, which admittedly must, in certain instances, be adjusted to fit the requirements of the particular subject taught. This is especially true with regard to the radio, instrument, and accessory curricula.

"Moreover, the proposals with respect to the required facilities, equipment, material, and personnel are stated as general standards to be met by each applicant. The type and amount of such facilities, equipment, materials, and personnel must be determined in light of the requirements of the particular rating sought and the maximum number of students expected to be in attendance at any particular time. Justification as to compliance with such general standards is the primary responsibility of the applicant."

CAA Seeks to Reduce Ground-Travel Time

Appointment of Walter R. Macatee to represent the CAA in a program of encouraging the development of highways between cities and airports to reduce ground-travel time was announced last month by D. W. Rentzel, Administrator of Civil Aeronautics.

Mr. Macatee will work with the Bureau of Public Roads, State highway departments and local officials. The Bureau of Public Roads and the CAA will participate in a joint study of speeding highway transportation to and from airports.

In making the announcement, the Administrator stressed that CAA's participation in the highway program will be to encourage the sound and economical use of city-to-airport highways to increase their traffic capacities. Federal airport funds will not be used for these purposes.

Recent studies have indicated that average savings of travel-time between a number of cities and their airports could be reduced by approximately one-third by the installation of modern highways between the two points. In other cases, it was pointed out, relatively inexpensive modifications of existing highways would bring about substantial reductions in travel time between airports and cities.

Born in Front Royal, Va., Mr. Macatee is well known in highway and airport circles. He was district engineer for the Portland Cement Association and later served with the Asphalt Institute for 10 years. Most recently he was manager of the airports division of the American Roadbuilders Association in Washington.

Challenger-Monarch Merger Approval Indicated by CAB

The Civil Aeronautics Board last month approved the acquisition of the controlling stock interest in Challenger Airlines Co., by the principal stockholder of Monarch Air Lines, Inc., and further indicated it would approve a merger of the two feeder air carriers.

Monarch and Challenger operate in the States of Montana, Wyoming, Utah, Colorado, and New Mexico, with terminals in Billings, Mont.; Salt Lake City, Utah; Denver, Colo.; and Albuquerque, N. Mex.; furnishing local service to many points in these States not having trunk line air service. The certificated route mileage of Challenger is now 2,424, and of Monarch 1,683 miles.

The Board revealed that the acquisition of the stock of Challenger by H. S. Darr, who now controls Monarch, was proposed after agreements were reached by Mr. Darr and Claude Neon, Inc., controlling Challenger, for the purchase from Neon of 224,000 shares of common stock of Challenger at a price of \$277,000.

Airport Turfing Information Given in CAA Publication

"Airport Turfing" is the title of a recent publication of the Civil Aeronautics Administration intended to serve as a guide to airport owners, operators, builders, and others interested in the development of turf for airports. Its purpose is to point out and describe the various problems involved as well as the methods used in the establishment and maintenance of a good turf.

The publication is on sale for 25 cents a copy by the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Aircraft Use, Continental United States, 1947-1948 (Preliminary)

Type of flying	Aircraft					Hours flown					Average hours flown	
	1948		1947		Percent increase or (decrease)	1948		1947		Percent increase or (decrease)	1948	1947
	Number	Per cent	Number	Per cent		Number (000)	Per cent	Number (000)	Per cent			
Combined all types*	89,550	—	86,380	—	4	15,130	100	16,334	100	(7)	169	189
Personal	45,030	50	43,930	51	3	2,606	17	2,616	16	—	58	60
Business	32,110	36	26,590	31	21	2,576	17	1,966	12	31	80	74
Instructional	30,840	34	32,620	38	(5)	8,701	57	10,353	63	(16)	282	317
Transportation for hire	4,440	5	6,100	7	(27)	537	4	546	3	(2)	121	90
Other revenue producing	6,830	8	7,180	8	(5)	329	4	733	5	(28)	77	102
Not classified	1,760	2	2,120	2	(17)	181	1	120	1	51	103	57

*The number of aircraft in the various categories total to more than the number in "Combined all types" because there can be more than one type of flying per aircraft.

NOTE.—This table excludes all aircraft operated by the scheduled airlines and the Civil Aeronautics Administration.

Business Use of Plane Shows Sharp 1948 Gain

(Continued from page 1)

Of the hours flown, 57 percent were for instructional purposes, 17 percent were for personal usage, 17 percent for business flying, 4 percent for transportation for hire, 4 percent for other revenue-producing activities, and 1 percent were not classified. However, 50 percent of the aircraft operated were engaged in personal flying, 36 percent in business flying, 34 percent in instructional flying, 5 percent in transportation for hire, 8 percent in other revenue-producing activities, and 2 percent were not classified. (The percentage totals exceed 100 percent because one aircraft can be used for several types of flying.)

Instructional Flying Declines.—An outstanding development was the sharp decline in instructional flying, which fell from 10,353,000 hours in 1947, or 63 percent of the total, to 8,701,000 hours in 1948, or 57 percent of the total. Number of aircraft engaged in flight training decreased from 32,620, or 38 percent of all aircraft, to 30,840, or 34 percent of the total. Even more noteworthy was the decline in the average hours flown by such planes—from 317 hours each in 1947, to 282 hours each in 1948.

The substantial increase in business flying was considered probably the most encouraging aspect of the 1948 private flying picture. Business flying, which includes not only flying for corporate or executive purposes but flying by individuals, including farmers on personal business, totaled 2,576,000 hours, compared with 1,966,000 hours in 1947. This was a gain of 31 percent, and marked the second consecutive year that business flying has registered the largest proportionate gain of any type of flying. Approximately 32,110 aircraft were engaged in business flying. This was 36 percent of the total, compared with 26,590 aircraft, or 31 percent of the total, in 1947. Average utilization per plane went up to 80 hours in 1948, as against 74 hours each the previous year.

Personal Flying Gain Slight.—Flying for pleasure or personal purposes showed little change from the relatively low level of 1947. Hours logged in personal flying totaled 2,606,000, or 17 percent of all flying, compared with 2,616,000 hours in 1947, which represented 16 percent of the total. Number of aircraft engaged in this kind of flying also remained approximately stationary—45,030 planes in 1948, against 43,930 in 1947. Average utilization per plane was 58 hours in 1948, compared with 60 hours the year before.

Transportation-for-hire flying remained at approximately the same level as in 1947, with 537,000 hours

flown, compared with 546,000 hours the previous year. However, the number of aircraft in this type of flying dropped sharply from 6,100 in 1947, to 4,440 in 1948, resulting in a gain in the average hours flown per plane from 90 hours each in 1947 to 121 hours in 1948.

Fewer Planes for Hire.—The decline in the number of aircraft engaged in transportation for hire was taken as an indication of a high mortality rate among fixed base operators carrying on this activity largely with small planes. Volume approximated the 1947 level only because of expanded operations of a growing number of irregular air carriers who obtained heavy usage from a relatively few transport-type aircraft.

Other revenue-producing activities in 1948 continued, as in 1947, to constitute only a small percentage of total private flying operations. A total of 529,000 hours, or 4 percent of all flying hours, were flown by 6,830 aircraft in other revenue flying, which includes a great miscellany of industrial activities such as crop dusting, spraying, rentals, aerial photography advertising, etc. Within the scope of the survey, these figures are not significantly different from the 733,000 hours flown in these activities in 1947 by 7,180 aircraft.

With the exception of the operations of the noncertificated cargo carriers and some of the large irregular carriers which engage only in the carriage of passengers and cargo for hire, both other revenue-producing flying and transportation-for-hire flying are carried on simultaneously by fixed-base operators largely as sidelines to their chief source of income, which is instructional flying. The contraction in instructional flying and the consequent substantial reduction in the number of flight schools therefore affected the volume of these activities adversely.

Survey Conducted by Mail.—The survey was conducted by mail and personal interviews, using standard sampling techniques. Close to 16,000 aircraft were surveyed and replies were received from nearly two-thirds of the canvass. The total number of aircraft represented by the sample was 89,550, as against 86,380 which were the basis of the 1947 survey. Thus, the survey reveals that while the number of aircraft in use was greater during 1948, the total volume of flying was below 1947. Nevertheless, it was felt certain that by the end of the year the number of aircraft in actual use was far below the total being operated during the first part of the year, a conclusion which seems to be corroborated by the subsequent decrease in aircraft registrations in 1949.

The table herewith shows the number and percent of aircraft and hours flown by type of flying in continental United States in 1947 and 1948.

